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The Chemkin Thermodynamic Data Base

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THE CHEMKIN THERMODYNAMIC DATA BASE

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Abstract

The Chemkin general-purpose chemical kinetics package uses a data base that contains polynomial fits to specific heats, standard state enthalpies, and standard state entropies. The fourteen coefficient fits are in the same form as used in the NASA Complex Chemical Equilibrium Program (Gordon and McBride, 1971). This report represents a compilation of the data that is currently in use at Sandia National Laboratories.

THE CHEMKIN THERMODYNAMIC DATA BASE

Introduction

This report documents the thermodynamic property data base that is an integral part of the Chemkin[1,2] chemical kinetics computer code package. The codes are documented in user's manuals. However, a brief description of the package's structure may help put the role of the data base in perspective. Chemkin is composed of four important pieces: the Interpreter, the Thermodynamic Data Base, the Linking File, and the Gas-Phase Subroutine Library. The Interpreter is a program that first reads the user's symbolic description of the reaction mechanism. It then extracts thermodynamic information for the species involved from the Thermodynamic Data Base. The user may add to or modify the information in the data base by input to the Interpreter. In addition to printed output, the Interpreter writes a Linking File, which contains all the pertinent information on the elements, species, and reactions in the mechanism.

Once the Interpreter has been executed and the Linking File created, the user is ready to use the Gas-Phase Subroutine Library. These subroutines are called from the user's Fortran code. The Chemkin gas-phase subroutines, of which there are over 100, are called as needed to return information on the elements, species, reactions, equations of state, thermodynamic properties, chemical production rates, sensitivity parameters, derivatives of chemical production rates, and derivatives of thermodynamic properties. Generally the input to these routines is the state of the gas – pressure or density, temperature, and the species composition. The Chemkin documentation is designed to facilitate selection of the particular Chemkin subroutines that are needed for a given problem.

We developed the Chemkin package and its follow-on applications programs for use in our combustion research programs. Our combustion work concentrates on small molecule hydrocarbon systems, especially those involving the nitrogen chemistry responsible for producing nitrogen-oxygen based pollutants. Thus we have gathered thermodynamic properties for the species important in such systems. Moreover, because of our investigations of the chemical vapor deposition of silicon from silane, the data base includes several silicon-hydrogen compounds. It was not our intent to make wide distribution of these codes or data bases. However, over the past several years, the code package has found rather wide acceptance.

As part of the Chemkin code distribution process, we have supplied its associated thermodynamic data base. However, this was done in an unstructured way. That is, recipients of the data base had no way to tell where the data came from or any information about its validity. The data base was simply the one that was in use at Sandia at the time the tape was written. Since, a great many Chemkin simulations are finding their way into the literature, we decided that it would be a good idea to document the data base. However, our basic motivation remains unchanged. We maintain the data base for our own research programs, and we in no way see ourselves as a clearinghouse for property data or as competitors with JANAF or the National Bureau of Standards. Nevertheless, for certain classes of problems, we believe that sharing our thermodynamic data compilation could prove valuable in other research programs.

In this report, we first explain how the polynomial fits to the property data are generated. Then in three appendices we present the data itself in several formats. Appendix A lists the standard state heats of formation and entropies at 298K for each of the species in the data base. Appendix B is a listing of the data base in the form that Chemkin expects to find it. Finally, Appendix C presents a graphical account of the properties as a function of temperature. Where available, the actual data from which the fits were determined are also plotted to indicate the accuracy of the fit. Also in this section a reference to the source of the data is provided.

The data sources

The data comes from three major sources. First is the JANAF[3] tables. Generally speaking, if available, JANAF is the preferred source of our data. The properties of many hydrocarbon species not included in the JANAF compilations come from the compilation of Burcat.[4] In this case, the data provided by Burcat is already fit in the form required for our data base. The third source of data is quantum chemistry computations.

Calculation of thermochemical data using high-quality *ab initio* electronic structure calculations has been a long-standing goal. However, the availability of supercomputers and new theoretical techniques now allow the calculation of thermochemical properties with chemical accuracy, i.e., ΔH_f to within $\pm$ 3 kcal/mole. A technique that has been applied to over 900 combustion-related chemical species and to our study of silicon-containing species is denoted the BAC-MP4 method.[5–9] It combines electronic structure calculations using fourth-order Møller-Plesset perturbation theory[10–12] (MP4) with empirically-derived bond additivity correction (BAC) factors to account for systematic error in the *ab initio* calculations due to truncated wave functions and incomplete basis sets.

The fitting procedure

The data format used is a minor modification of that used by Gordon and McBride[13] for the thermodynamic data base in the NASA Chemical Equilibrium program. The thermodynamic data are stored as polynomial fits to specific heat c_p/R, enthalpy H^0/RT, and entropy S^0/R. There are seven coefficients for each of two temperature ranges.

$$\frac{c_p}{R} = a_1 + a_2 T + a_3 T^2 + a_4 T^3 + a_5 T^4 \tag{1}$$

$$\frac{H^0}{RT} = a_1 + \frac{a_2}{2} T + \frac{a_3}{3} T^2 + \frac{a_4}{4} T^3 + \frac{a_5}{5} T^4 + \frac{a_6}{T} \tag{2}$$

$$\frac{S^0}{R} = a_1 \ln T + a_2 T + \frac{a_3}{2} T^2 + \frac{a_4}{3} T^3 + \frac{a_5}{4} T^4 + a_7 \tag{3}$$

Thus for each species there are 14 coefficients in all. In addition to the polynomial coefficients for each species, the Thermodynamic Data Base provides the species name, its elemental makeup, and the temperature ranges over which the fits are valid.

The essential input to the fitting procedure is a table of specific heat, enthalpy, and entropy as a function of temperature. In addition, since the fits span two temperature ranges, the temperature ranges have to be specified. Generally speaking, the common temperature connecting the two ranges is 1000K, but it may be different in some cases.

The constrained linear least squares fitting procedure[14,15] is a three stage process. The first step is to determine simultaneously a_1 through a_5 for both temperature ranges by fitting the specific heats Eq. (1). The fitting procedure is constrained such that at the common temperature both the specific heat and its first derivative are equal. The second step is to determine a_6 for both temperature ranges by fitting the enthalpy data. In this stage, $a_1 - a_5$ are held fixed, and as in the c_p fitting, equality constraints on the fit and its first derivative are imposed at the common temperature. Finally, the a_7 coefficients are determined by fitting the entropy data. Again, the $a_1 - a_5$ coefficients are held fixed and the equality constraints are imposed at the common temperature. We note that this fitting procedure is slightly different from the procedure followed by McBride and Gordon,[16] who fit all coefficients simultaneously.

Data base management

The Chemkin data base requires a four card image fixed format representation of the properties for each species. This is consistent with other data bases, such as that used in the NASA Chemical Equilibrium Code.[13] However, while this format is complete enough to describe the properties, it contains only the bare minimum data needed. Therefore, we now maintain the data base using a relational data base manager program called DATATRIEVE, which is a proprietary product of the Digital Equipment Corporation (DEC).

The data base contains the following fields:

1. Identification - chemical symbol, species name, elemental composition, and phase;

2. Fit coefficients for the thermodynamic properties, and the temperature ranges for which they apply.

3. Data used to generate the fit, if available. These fields contain $H^0(298)$, $S^0(298)$, and tables of $c_p(T)$, $S^0(T)$, $H^0(T)$ as functions of temperature.

4. References - source of data, date, any relevant comments.

Using a relational data base manager provides considerably more flexibility in managing the data than the original Chemkin data base. Various types of reports can be produced from database manager program. The appendices in this report represent three examples of such reports. The data base that Chemkin uses is simply one of the reports from the DATATRIEVE system.

Acknowledgement

Our colleagues C. F. Melius, J. S. Binkley, P. Ho, R. E. Mitchell, and M. E. Coltrin have made and continue to make important contributions to this data base.

References

1. Kee, R. J., Miller, J. A. and Jefferson, T. H., "CHEMKIN: A General-Purpose, Problem-Independent, Transportable, Fortran Chemical Kinetics Code Package," Sandia National Laboratories Report, SAND80-8003, (1980).

2. Kee, R. J. and Miller, J. A., "A Structured Approach to the Computational Modeling of Chemical Kinetics and Molecular Transport in Flowing Systems," Sandia National Laboratories Report SAND86-8841, to appear *Springer Series in Chemical Physics* (1986).

3. JANAF Thermochemical Tables, Natl. Stand. Ref. Data Ser. NSRDS-NBS 37, (1971); also Dow Chemical Company, distributed by Clearinghouse for Federal Scientific and Technical Information, PB168370 (1965) and subsequent updates.

4. Burcat, A., "Thermochemical Data for Combustion Calculations," p. 455, *Combustion Chemistry* W. C. Gardiner, Ed., Springer-Verlag, New York (1984).

5. Melius C. F. and Binkley, J. S., "The Energetics of the Reaction Pathways for HCN + O $\rightarrow$ Products," Paper WSS/CI 83-61, 1983 Fall Meeting of the Western States Section of the Combustion Institute, University of California, Los Angeles, CA. October 17-18, 1983.

6. Melius C. F. and Binkley, J. S., "Energetics of the Reaction Pathways for NH_2 + NO → Products and NH + NO → Products," *20th Symp. (International.) on Comb.*, Comb. Inst. 575, 1984.

7. Melius C. F. and Binkley, J. S., " Reactions of NH and NH_2 with O and O_2: Theoretical Studies," *ACS Symposium Series* **249**, 103 (1984).

8. Ho, P., Coltrin, M. E., Binkley, J. S. and Melius, C. F., "A Theoretical Study of the Heats of Formation of SiH_n, $SiCl_n$, and SiH_nCl_m Compounds," *J. Phys. Chem.*, **89** 4647 (1985).

9. Ho, P., Coltrin, M. E., Binkley, J. S. and Melius, C. F., "A Theoretical Study of the Heats of Formation of Si_2H_n (n=0-6) Compounds and Trisilane," *J. Phys. Chem.*, **90** 3399 (1986).

10. Pople, J. A., Binkley, J. S. and Seeger, R., "Theoretical Models Incorporating Electron Correlation," *Int. J. Quant. Chem.* **S10**, 1 (1976).

11. Krishnan, R. and Pople, J. A., "Approximate Fourth-Order Perturbation Theory of the Electron Correlation Energy," *Int. J. Quant. Chem.* **14**, 91 (1978).

12. Krishnan, R., Frisch, M. J., and Pople, J. A., "Contribution of Triple Substitutions to the Electron Correlation Energy in Fourth Order Perturbation Theory," *J. Chem. Phys.* **72**, 4244 (1980).

13. Gordon S. and McBride, B. J., "Computer Program for Calculation of Complex Chemical Equilibrium Compositions, Rocket Performance, Incident and Reflected Shocks and Chapman-Jouguet Detonations, NASA SP-273, (1971).

14. Hanson, R. J. and Haskell, K. H., "Algorithm for Linear Least Squares Problems with Equality and Non-negativity Constriants," Sandia National Laboratories Report, SAND77-0552, (1978).

15. Hanson, R. J. and Haskell, K. H., "Selected Algorithms for Linearly Constrained Least Squares Problems – A Users Guide," Sandia National Laboratories Report, SAND78-1290, (1979).

16. McBride, B. J. and Gordon S., "FORTRAN IV Program for Calculation of Thermodynamic Data," NASA TN D-4097, (1967).

APPENDIX A. STANDARD STATE ENTHALPIES AND ENTROPIES AT 298K

TABLE A1.

Species	$H^0(298)$ Kcal/mole	$S^0(298)$ cal/mole K	Species	$H^0(298)$ Kcal/mole	$S^0(298)$ cal/mole K
Al	78.77	39.29	C_2HCl	51.08	57.80
Al_2H_6	21.34	62.73	C_2N	132.95	55.13
Al_2Me_6	−61.17	131.01	C_2N_2	73.84	57.69
$AlAs$	107.28	60.63	C_2O	68.47	55.65
AlH	61.97	44.85	C_3	195.92	56.64
AlH_2	41.93	54.38	C_3H_2	106.47	56.19
AlH_3	18.82	52.28	C_3H_4	45.21	54.87
$AlMe$	19.74	60.65	C_3H_4C	66.17	58.16
$AlMe_2$	12.75	77.37	C_3H_4P	43.95	49.47
$AlMe_3$	−20.29	83.65	C_3H_6	4.88	61.48
Ar	0.00	36.96	C_3H_8	−24.81	64.53
Ar^+	364.76	39.73	C_3O_2	−22.37	65.94
As	75.45	43.51	C_4	231.91	54.53
As_2	47.06	59.80	C_4H	155.02	60.86
As_3	65.32	77.49	C_4H_2	111.66	59.75
As_4	37.11	78.42	C_4H_6	34.95	68.13
$AsAlMe$	69.97	81.57	C_4H_8	−0.13	73.52
$AsAlMe_2$	63.23	90.97	C_5	233.91	57.80
$AsGaEt$	82.72	95.17	C_5H	185.92	62.18
$AsGaEt_2$	69.52	109.79	C_5H_{12}	−34.96	83.45
$AsGaMe$	83.47	85.72	C_5H_2	165.17	63.66
$AsGaMe_2$	81.22	90.97	C_5H_3	135.36	70.50
$AsGaMeH$	93.71	84.69	C_5H_6	31.98	64.42
AsH	61.73	50.18	C_6H	213.07	74.07
AsH_2	42.23	46.43	C_6H_{10}	−1.00	74.72
AsH_3	16.62	55.63	C_6H_{14}	−39.89	92.84
$AsMe$	59.18	63.78	C_6H_2	169.59	70.89
$AsMe_2$	34.19	79.47	C_6H_3	158.38	76.26
$AsMe_3$	2.92	85.74	C_6H_4	121.72	69.51
C	171.22	37.74	C_6H_5	79.40	69.79
$C(S)$	0.00	1.37	$C_6H_5(L)$	140.52	84.23
C^+	431.85	36.92	C_6H_5O	10.35	74.84
C^-	140.55	36.14	C_6H_5OH	−25.00	76.90
C_2	200.15	47.61	C_6H_6	19.80	64.33
C_2^-	105.96	46.94	C_6H_7	47.94	73.05
C_2F_6	−321.07	79.35	C_8H	288.74	78.35
C_2H	133.95	49.54	C_8H_2	226.06	75.91
C_2H_2	54.17	47.99	CCl	119.95	53.61
C_2H_3	68.38	55.30	CCl_2	56.98	63.36
C_2H_4	12.53	52.35	CCl_3	18.99	70.90
C_2H_5	28.00	60.11	CCl_4	−22.93	74.01
C_2H_6	−20.03	54.69	CH	141.94	43.70

TABLE A1. (continued)

Species	$H^0(298)$ Kcal/mole	$S^0(298)$ cal/mole K	Species	$H^0(298)$ Kcal/mole	$S^0(298)$ cal/mole K
CH^+	388.65	40.98	CO_2^-	−105.46	57.46
CH_2	92.45	46.69	COS	−33.07	55.30
$CH_2(S)$	101.46	45.08	CS	66.97	50.27
CH_2CHCCH	69.11	67.30	CS_2	27.94	56.83
CH_2CHCCH_2	74.11	75.28	E	0.00	4.98
CH_2CHCH_2	38.62	64.71	F	18.85	37.90
$CH_2CHCHCH$	86.06	73.04	F_2	0.00	48.42
$CH_2CHCHCH_2$	28.28	70.41	F_2SiNH	−146.87	70.89
CH_2Cl_2	−22.82	64.54	F_3SiN	−199.94	73.84
CH_2CO	−12.39	57.76	$FNNF$	17.87	63.44
CH_2F_2	−107.67	58.89	FNO_3	2.50	69.96
CH_2HCO	5.99	63.97	FO	25.99	51.74
CH_2O	−27.69	52.22	FO_2	3.00	61.88
CH_2OH	−4.10	58.85	$FSiN$	54.35	63.64
CH_3	34.80	46.35	Ga	68.50	43.81
CH_3CC	123.77	60.25	Ga_2H_6	31.49	69.03
CH_3CCCH_2	74.31	80.32	$GaAs$	88.37	63.20
CH_3CCCH_3	40.92	73.33	$GaAs(3,C)$	245.65	99.96
CH_3CCH_2	61.06	69.22	$GaAs(3,L)$	256.15	127.70
CH_3CH_2CCH	44.73	71.41	$GaAs(5,C)$	357.61	130.45
CH_3CHCH	64.72	68.71	$GaAs(5,L)$	419.83	193.42
CH_3Cl	−19.99	55.95	$GaEt$	17.74	81.57
CH_3CO	−5.40	63.71	$GaEt_2$	4.50	100.39
CH_3F	−55.98	53.20	$GaEt_3$	−17.04	112.94
CH_3HCO	−39.49	63.02	GaH	54.78	49.16
CH_3O	3.89	54.58	GaH_2	40.98	55.98
CH_3OH	−48.04	57.24	GaH_3	26.99	54.48
CH_3SiCl_3	−126.35	83.85	$GaMe$	18.52	63.78
CH_4	−17.89	44.44	$GaMe_2$	16.42	80.52
$CHCl$	79.97	56.09	$GaMe_3$	−10.87	87.84
$CHCl_3$	−24.65	70.60	H	52.07	27.38
CHF	29.99	53.33	H^+	367.01	26.00
CHF_3	−166.54	62.00	H^-	33.18	26.00
Cl	28.98	39.44	H_2	0.00	31.19
Cl_2	0.00	53.27	H_2AlMe	6.00	61.70
CN	103.96	48.38	H_2AsMe	24.04	64.83
CN^+	430.70	50.96	H_2C_4O	54.57	66.40
CN^-	14.49	46.79	H_2CCCCH	111.27	72.91
CN_2	112.95	54.01	H_2CCCCH_2	75.46	65.10
CNN	139.64	55.33	H_2CCCH	83.00	61.45
CO	−26.41	47.19	H_2CN	59.08	53.57
CO_2	−94.01	51.05	H_2CNH	21.84	55.43

TABLE A1. (continued)

Species	$H^0(298)$ Kcal/mole	$S^0(298)$ cal/mole K	Species	$H^0(298)$ Kcal/mole	$S^0(298)$ cal/mole K
H_2CNNO_2	33.63	73.03	$HGaMe$	28.99	65.88
H_2GaEt	−2.30	83.65	$HGaMe_2$	2.50	79.47
H_2GaMe	14.99	64.83	$HMeGaEt$	4.00	88.87
H_2NF	−6.49	54.70	HN_3	71.84	57.12
H_2O	−57.78	45.08	$HNCO$	−24.89	57.03
$H_2O(L)$	−68.29	16.70	HNF	31.98	54.95
$H_2O(S)$	−69.93	10.70	HNF_2	−13.79	60.03
H_2O_2	−32.52	55.63	HNO	23.79	52.70
H_2S	−4.90	49.12	HNO_3	−32.09	63.64
$H_2Si(NH_2)_2$	−37.14	72.35	HO_2	2.50	54.70
H_2SiN	149.13	59.49	$HOCN$	−2.28	59.21
H_2SiNH	40.94	60.07	$HONO$	−18.33	59.56
H_2SiNH_2	28.08	65.76	$HSi(NH_2)_2$	5.76	73.35
H_2SiNH_3	23.84	66.76	$HSi(NH_2)_3$	−64.65	79.49
H_2SiSiH_2	62.84	66.87	$HSiCl$	16.99	59.77
$H_3AsGaEt_3$	−10.99	124.43	$HSiN$	92.95	54.73
$H_3AsGaMe_3$	−4.70	102.46	$HSiNH$	84.75	60.66
H_3SiN	234.51	56.91	$HSiNH_2$	26.28	60.03
H_3SiNH	51.32	66.19	$I*C_3H_7$	18.19	60.07
H_3SiSiH	80.17	66.84	Me_2GaEt	−5.25	97.24
H_3SiSiH_3	19.16	68.03	$MeGaEt$	14.25	89.92
$HAlMe$	27.24	62.75	$MeGaEt_2$	−7.32	106.66
$HAlMe_2$	−6.72	75.30	N	112.90	36.59
$HAsAlMe$	56.48	83.64	$N*C_3H_7$	22.59	64.10
$HAsGaEt$	69.12	97.24	N_2	0.00	45.75
$HAsGaMe$	69.97	87.84	N_2H_2	50.88	52.18
$HAsMe$	42.56	65.88	N_2H_3	36.77	54.59
$HAsMe_2$	18.09	78.42	N_2H_4	22.78	57.00
$HCCHCCH$	129.83	69.03	$N_2H_4(L)$	12.09	29.02
$HCCO$	42.43	60.71	N_2O	19.60	52.52
$HCCOH$	20.42	58.67	N_2O^+	318.56	55.84
HCl	−22.06	44.62	N_2O_4	2.17	72.70
HCN	32.29	48.19	N_3	98.96	54.08
$HCNH$	66.08	55.87	NCO	38.08	55.45
$HCNO$	38.41	53.77	NF	59.47	51.40
HCO	10.39	53.63	NFO	−15.69	59.25
HCO^+	199.02	48.57	NFO_2	−25.99	62.15
He	0.00	30.11	NH	85.17	43.27
He^+	568.23	31.48	NH_2	45.48	46.48
HF	−65.12	41.49	NH_3	−10.97	46.01
$HGaEt$	22.89	83.64	NNH	58.54	53.60
$HGaEt_2$	−2.30	100.46	NO	21.57	50.32

TABLE A1. (continued)

Species	$H^0(298)$ Kcal/mole	$S^0(298)$ cal/mole K	Species	$H^0(298)$ Kcal/mole	$S^0(298)$ cal/mole K
NO^+	236.57	47.32	$SiCl_3H$	−118.55	74.87
NO_2	7.91	57.31	$SiCl_4$	−158.34	79.06
NO_2^-	−48.43	56.49	$SiClH_3$	−32.19	59.77
NO_3	16.99	60.33	SiF	−12.41	52.69
O	59.53	38.45	$SiF(NH_2)_2$	−95.30	77.67
O^+	374.80	36.99	$SiF(NH_2)_3$	−170.48	87.88
O^-	24.31	37.67	SiF_2	−149.80	61.36
O_2	0.00	48.98	$SiF_2(NH_2)_2$	−247.09	82.74
O_2^-	−11.61	50.04	SiF_2N	−63.08	70.48
O_3	34.09	57.05	SiF_2NH_2	−167.14	77.45
OH	9.31	43.86	SiF_3	−237.33	67.74
OH^+	314.67	43.64	SiF_3NH	−249.55	83.66
OH^-	−34.31	41.17	SiF_3NH_2	−317.76	81.00
S	66.17	40.07	SiF_3NHSiH_3	−320.04	96.84
$S(L)$	0.44	8.77	SiF_3NSiH_3	−252.73	99.30
$S(S)$	0.00	7.62	SiF_4	−385.83	67.52
S^+	306.35	39.06	$SiFH_3$	−85.47	56.98
$S-Triazine$	56.35	64.46	$SiFNH$	−13.48	68.92
S_2	30.70	54.48	$SiFNH_2$	−80.01	64.59
SH	33.29	46.71	SiH	91.66	44.18
Si	107.66	40.10	SiH_2	64.77	49.47
$Si(L)$	11.58	10.62	SiH_2Cl	7.80	62.27
$Si(NH_2)_3$	−18.62	84.24	SiH_2F	−42.15	59.68
$Si(NH_2)_4$	−92.63	85.34	SiH_2F_2	−186.31	62.78
$Si(S)$	0.00	4.50	SiH_3	47.41	51.78
Si_2	140.94	54.87	SiH_3NH_2	−11.39	65.64
Si_2C	127.95	57.86	SiH_3NHSiH_3	−14.31	85.92
Si_2F_6	−569.38	97.12	SiH_3NSiH_3	48.88	86.66
Si_2H_2	83.46	58.53	SiH_4	8.10	48.88
Si_2H_3	105.66	65.48	$SiHCl_2$	−34.29	70.27
Si_2H_5	55.68	68.82	$SiHF$	−35.69	57.04
Si_2H_6	19.09	64.50	$SiHF_2$	−139.51	65.03
Si_3	151.94	63.98	$SiHF_3$	−288.52	66.62
Si_3H_8	28.89	81.52	SiN	115.50	51.93
$Si_3N_4(A)$	−177.93	26.98	$SiNH$	38.38	51.64
SiC	171.94	50.91	$SiNH_2$	48.65	58.54
$SiC(B)$	−17.49	3.98	SN	62.97	53.02
SiC_2	146.94	56.53	SO	1.19	52.99
$SiCl$	37.88	56.77	SO_2	−70.92	59.27
$SiCl_2$	−40.28	67.17	SO_3	−94.55	61.32
$SiCl_2H_2$	−74.47	68.37			
$SiCl_3$	−76.47	75.47			

APPENDIX B. DATA BASE LISTING IN THE CHEMKIN FORMAT

Chemkin expects the thermodynamic data in a specific format, which is essentially the same as that used by the NASA Complex Chemical Equilibrium Program.[13] In addition to the fourteen fit coefficients, the data base also contains the species' name, its elemental composition, its electronic charge, and an indication of its phase (gas, liquid or solid). The data for each species requires four formatted 80 column card images. Table B1 provides the data format specification.

TABLE B1.
FORMAT FOR THERMODYNAMIC DATA

Card Number	Contents	Format	Card Column
1	Species name (must start in Column 1)	18A1	1 to18
	Date (not used in the code)	6A1	19 to 24
	Atomic symbols and formula	4(2A1,I3)	25 to 44
	Phase of species (S, L, or G for solid, liquid, or gas, respectively)	A1	45
	Low temperature	E10.0	46 to 55
	High temperature	E10.0	56 to 65
	Common temperature (if needed) (blank for default)	E8.0	66 to 73
	Atomic symbols and formula (if needed) (blank for default)	2A1,I3	74 to 78
	The integer "1"	I1	80
2	Coefficients $a_1 - a_5$ in Eqs. (1-3), for upper temperature interval	5(E15.0)	1 to 75
	The integer "2"	I1	80
3	Coefficients a_6, a_7 for upper temperature interval, and a_1, a_2, and a_3 for lower	5(E15.0)	1 to 75
	The integer "3"	I1	80
4	Coefficients a_4, a_5, a_6, a_7 for lower temperature interval	4(E15.0)	1 to 60
	The integer "4"	I1	80

```
THERMO
   300.000  1000.000  5000.000
AL                120186AL  1               G  0300.00   5000.00  0600.00      1
 0.02559589E+02-0.10632239E-03 0.07202828E-06-0.02121105E-09 0.02289429E-13    2
 0.03890214E+06 0.05234522E+02 0.02736825E+02-0.05912374E-02-0.04033937E-05    3
 0.02322343E-07-0.01705599E-10 0.03886794E+06 0.04363879E+02                   4
AL2H6             120186AL  2H   6          G  0300.00   1500.00  0600.00      1
 0.02634884E+02 0.02135952E+00 0.03154151E-05-0.07684674E-07 0.02335831E-10    2
 0.08871346E+05 0.09827515E+02-0.06800681E+02 0.05080744E+00 0.10397471E-04    3
-0.11195819E-06 0.08459155E-09 0.10605371E+05 0.05554526E+03                   4
AL2ME6            120186AL  2C   6H  18     G  0300.00   1500.00  0600.00      1
 0.01773147E+03 0.04935747E+00 0.11968535E-05-0.16398263E-07 0.04890867E-10    2
-0.03855560E+06-0.05053298E+03-0.07159750E+01 0.10671087E+00 0.02117604E-03    3
-0.02193211E-05 0.16441438E-09-0.03515546E+06 0.03890762E+03                   4
ALAS              120186AL  1AS 1           G  0300.00   1500.00  0600.00      1
 0.04790026E+02-0.01908225E-03-0.01983390E-05 0.02239358E-08-0.06904706E-12    2
 0.05259290E+06 0.03259703E+02 0.05047764E+02-0.06419947E-02-0.14320714E-05    3
 0.04754390E-07-0.03297621E-10 0.05254264E+06 0.01985205E+02                   4
ALH               120186AL  1H   1          G  0300.00   5000.00  1000.00      1
 0.03392644E+02 0.12153990E-02-0.04676595E-05 0.08691624E-09-0.06022668E-13    2
 0.03006845E+06 0.02758899E+02 0.03071503E+02 0.02165549E-01-0.03275638E-04    3
 0.04136983E-07-0.01877120E-10 0.03021221E+06 0.04548855E+02                   4
ALH2              120186AL  1H   2          G  0300.00   1500.00  0600.00      1
 0.04486543E+02 0.03128831E-01-0.01969438E-05-0.10160304E-08 0.03497468E-11    2
 0.01960959E+06 0.08167897E+01 0.02442136E+02 0.09915913E-01 0.02471082E-05    3
-0.02119583E-06 0.01710233E-09 0.01997587E+06 0.10652699E+02                   4
ALH3              120186AL  1H   3          G  0300.00   1500.00  0600.00      1
 0.04186837E+02 0.06159249E-01-0.03877593E-06-0.02061928E-07 0.06600276E-11    2
 0.07908078E+05 0.05134396E+01 0.10083231E+01 0.16403245E-01 0.01976746E-04    3
-0.03528558E-06 0.02753377E-09 0.08484656E+05 0.15858377E+02                   4
ALME              120186AL  1C   1H   3     G  0300.00   1500.00  0600.00      1
 0.04662737E+02 0.07097939E-01 0.02520013E-05-0.02114863E-07 0.06097489E-11    2
 0.08203227E+05 0.01769244E+02 0.02664176E+02 0.13249141E-01 0.02525847E-04    3
-0.02394396E-06 0.01761854E-09 0.08574173E+05 0.11474494E+02                   4
ALME2             120186AL  1C   2H   6     G  0300.00   1500.00  0600.00      1
 0.06481282E+02 0.14746049E-01 0.05816529E-05-0.04621347E-07 0.13960405E-11    2
 0.03745072E+05-0.02603325E+02 0.09494573E+01 0.03206353E+00 0.06134020E-04    3
-0.06500042E-06 0.04911485E-09 0.04761408E+05 0.02419465E+03                   4
ALME3             120186AL  1C   3H   9     G  0300.00   1500.00  0600.00      1
 0.06654948E+02 0.02455144E+00 0.11765745E-05-0.07815023E-07 0.02255622E-10    2
-0.13409524E+05-0.03454481E+02-0.07027567E+01 0.04682764E+00 0.11499028E-04    3
-0.09160441E-06 0.06687293E-09-0.12037989E+05 0.03232771E+03                   4
AR                120186AR  1               G  0300.00   5000.00  1000.00      1
 0.02500000E+02 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-0.07453750E+04 0.04366000E+02 0.02500000E+02 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-0.07453750E+04 0.04366000E+02                   4
AR+               121286AR  1E  -1          G  0300.00   5000.00  1000.00      1
 0.02864864E+02-0.12035732E-03-0.10651992E-07 0.09074839E-10-0.09623876E-14    2
 0.01827230E+07 0.03543584E+02 0.02301341E+02 0.08035528E-02-0.01758805E-05    3
-0.01781093E-08-0.08937268E-13 0.01829281E+07 0.06659358E+02                   4
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AS                62987AS  1               G  0300.00   1500.00  0600.00      1
 0.02617010E+02 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.03720454E+06 0.06995524E+02 0.02617010E+02 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.03720454E+06 0.06995524E+02                   4
AS2               62987AS  2               G  0300.00   1500.00  0600.00      1
 0.04394201E+02 0.05389968E-02-0.02379401E-05-0.06541924E-09 0.05184186E-12    2
 0.02235093E+06 0.04897918E+02 0.03682891E+02 0.03121811E-01-0.10740519E-05    3
-0.05629472E-07 0.05178811E-10 0.02247355E+06 0.08283423E+02                   4
AS3               62987AS  3               G  0300.00   1500.00  0600.00      1
 0.07404036E+02 0.07818425E-02-0.03918297E-05-0.05203629E-09 0.06291907E-12    2
 0.03063825E+06-0.03417323E+02 0.06403142E+02 0.04477098E-01-0.01866642E-04    3
-0.07394750E-07 0.07012752E-10 0.03080965E+06 0.13371355E+01                   4
AS4               62987AS  4               G  0300.00   1500.00  0600.00      1
 0.09695766E+02 0.13062585E-02-0.05519564E-05-0.02150873E-08 0.14579349E-12    2
 0.15717321E+05-0.16188696E+02 0.07853760E+02 0.07916509E-01-0.02329820E-04    3
-0.15263119E-07 0.13774348E-10 0.16036290E+05-0.07409755E+02                   4
ASALME            62987AS  1AL  1C   1H   3G  0300.00   1500.00  0600.00      1
 0.07127107E+02 0.07357863E-01 0.02300796E-06-0.02226398E-07 0.06927227E-11    2
 0.03273438E+06-0.01847179E+02 0.04053423E+02 0.01726125E+00 0.01833498E-04    3
-0.03386952E-06 0.02626980E-09 0.03329309E+06 0.12996653E+02                   4
ASALME2           62987AS  1AL  1C   2H   6G  0300.00   1500.00  0600.00      1
 0.09909938E+02 0.14638499E-01 0.04118730E-05-0.04444657E-07 0.13295010E-11    2
 0.02815111E+06-0.15235312E+02 0.04808530E+02 0.03067687E+00 0.05048000E-04    3
-0.05908099E-06 0.04462290E-09 0.02908816E+06 0.09471621E+02                   4
ASGAET            62987AS  1GA  1C   2H   5G  0300.00   1500.00  0600.00      1
 0.09081073E+02 0.16746316E-01 0.12831301E-06-0.05590435E-07 0.01781314E-10    2
 0.03807443E+06-0.09142782E+02 0.06364698E+01 0.04382467E+00 0.06144686E-04    3
-0.09491641E-06 0.07374197E-09 0.03960893E+06 0.03164673E+03                   4
ASGAET2           62987AS  1GA  1C   4H  10G  0300.00   1500.00  0600.00      1
 0.10324288E+02 0.03073570E+00 0.10863354E-05-0.09971948E-07 0.02945979E-10    2
 0.03039490E+06-0.13164016E+02-0.03539248E+01 0.06369772E+00 0.13597417E-04    3
-0.12861423E-06 0.09572181E-09 0.03236903E+06 0.03865086E+03                   4
ASGAME            62987AS  1GA  1C   1H   3G  0300.00   1500.00  0600.00      1
 0.07322183E+02 0.06995478E-01 0.10693509E-06-0.01995283E-07 0.06040446E-11    2
 0.03949448E+06-0.07416680E+01 0.04877266E+02 0.14825589E-01 0.16521240E-05    3
-0.02712058E-06 0.02080195E-09 0.03994071E+06 0.11076703E+02                   4
ASGAME2           62987AS  1GA  1C   2H   6G  0300.00   1500.00  0600.00      1
 0.09352436E+02 0.15048197E-01 0.05157975E-05-0.04553518E-07 0.13487630E-11    2
 0.03735855E+06-0.12181144E+02 0.04382076E+02 0.03056344E+00 0.05477067E-04    3
-0.05834108E-06 0.04373509E-09 0.03827434E+06 0.11911109E+02                   4
ASGAMEH           62987AS  1GA  1C   1H   4G  0300.00   1500.00  0600.00      1
 0.07842794E+02 0.09682097E-01 0.10603061E-06-0.02991402E-07 0.09382673E-11    2
 0.04435297E+06-0.05093455E+02 0.03585119E+02 0.02336317E+00 0.02873356E-04    3
-0.04737894E-06 0.03674461E-09 0.04512702E+06 0.15471604E+02                   4
ASH               62987AS  1H   1           G  0300.00   1500.00  0600.00      1
 0.03219848E+02 0.10012498E-02-0.04874997E-08-0.11076533E-09-0.09254321E-13    2
 0.03008175E+06 0.06647311E+02 0.03865843E+02-0.11575710E-02-0.03494371E-05    3
 0.07079686E-07-0.06014027E-10 0.02996829E+06 0.03549869E+02                   4
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ASH2                62987AS  1H   2          G  0300.00   1500.00  0600.00      1
 0.03428307E+02 0.03181140E-01 0.14604843E-06-0.07937145E-08 0.01694413E-11    2
 0.02010282E+06 0.02904703E+02 0.03778945E+02 0.01759233E-01 0.08070806E-05    3
 0.02358763E-07-0.03043521E-10 0.02004861E+06 0.12729740E+01                   4
ASH3                62987AS  1H   3          G  0300.00   1500.00  0600.00      1
 0.04172022E+02 0.04371322E-01 0.02177574E-05-0.11832641E-08 0.04536373E-11    2
 0.06882915E+05 0.02803476E+02 0.09446356E+01 0.15084686E-01 0.12016960E-05    3
-0.03397465E-06 0.02767656E-09 0.07459168E+05 0.01832267E+03                   4
ASME                62987AS  1C   1H   3     G  0300.00   1500.00  0600.00      1
 0.04657260E+02 0.06976297E-01 0.02147556E-05-0.02101159E-07 0.06082149E-11    2
 0.02806422E+06 0.03409834E+02 0.02625270E+02 0.13252423E-01 0.02441628E-04    3
-0.02419566E-06 0.01786943E-09 0.02844080E+06 0.13273359E+02                   4
ASME2               62987AS  1C   2H   6     G  0300.00   1500.00  0600.00      1
 0.05981395E+02 0.15212837E-01 0.06993355E-05-0.04721619E-07 0.13699115E-11    2
 0.14679847E+05 0.11927411E+01 0.13903998E+01 0.02923331E+00 0.06598870E-04    3
-0.05620559E-06 0.04130367E-09 0.15533022E+05 0.02349980E+03                   4
ASME3               62987AS  1C   3H   9     G  0300.00   1500.00  0600.00      1
 0.06347764E+02 0.02466454E+00 0.11546286E-05-0.07877435E-07 0.02202225E-10    2
-0.16173225E+04-0.06316786E+01 0.02667388E+01 0.04253171E+00 0.11651064E-04    3
-0.07914706E-06 0.05603126E-09-0.04685539E+04 0.02904590E+03                   4
C                  121086C   1              G  0300.00   5000.00  1000.00      1
 0.02602087E+02-0.01787081E-02 0.09087041E-06-0.11499333E-10 0.03310844E-14    2
 0.08542154E+06 0.04195177E+02 0.02498584E+02 0.08085776E-03-0.02697697E-05    3
 0.03040729E-08-0.11066518E-12 0.08545878E+06 0.04753459E+02                   4
C(S)               121286C   1              S  0300.00   5000.00  1000.00      1
 0.14901664E+01 0.16621256E-02-0.06687204E-05 0.12908796E-09-0.09205334E-13    2
-0.07074018E+04-0.08717785E+02-0.06705661E+01 0.07181499E-01-0.05632921E-04    3
 0.02142298E-07-0.04168562E-11-0.07339498E+03 0.02601595E+02                   4
C+                 120186C   1E  -1          G  0300.00   5000.00  1000.00      1
 0.02511827E+02-0.01735978E-03 0.09504267E-07-0.02218851E-10 0.01862189E-14    2
 0.02166772E+07 0.04286130E+02 0.02595384E+02-0.04068664E-02 0.06892366E-05    3
-0.05266488E-08 0.15083378E-12 0.02166628E+07 0.03895729E+02                   4
C-                 121686C   1E   1          G  0300.00   5000.00  1000.00      1
 0.02990221E+02-0.09184596E-02 0.05055560E-05-0.07703410E-09 0.03163271E-13    2
 0.06983931E+06 0.12594533E+01 0.02783902E+02-0.01774287E-01 0.03696760E-04    3
-0.03066693E-07 0.08637622E-11 0.06998511E+06 0.02726281E+02                   4
C2                 121286C   2              G  0300.00   5000.00  1000.00      1
 0.04135978E+02 0.06531618E-03 0.01837099E-05-0.05295085E-09 0.04712137E-13    2
 0.09967272E+06 0.07472923E+01 0.06996045E+02-0.07400601E-01 0.03234703E-04    3
 0.04802535E-07-0.03295917E-10 0.09897487E+06-0.13862268E+02                   4
C2-                121286C   2E   1          G  0300.00   5000.00  1000.00      1
 0.03796891E+02 0.02530049E-02 0.09709118E-06-0.16148038E-10-0.03212893E-15    2
 0.05207981E+06 0.16581468E+01 0.03468011E+02-0.02352874E-02 0.12439123E-05    3
 0.04705960E-08-0.08164274E-11 0.05231215E+06 0.03886699E+02                   4
C2F6               82489C   2F   6          G  0300.00   5000.00  1000.00      1
 0.16020573E+02 0.06273007E-01-0.02797778E-04 0.05517547E-08-0.04004651E-12    2
-0.16756543E+06-0.05519459E+03 0.03577448E+02 0.03913670E+00-0.02714862E-03    3
 0.04348459E-08 0.04007135E-10-0.16421741E+06 0.09098384E+02                   4
```

```
C2H                 20387C   2H   1          G  0300.00   5000.00  1000.00      1
 0.04427688E+02 0.02216268E-01-0.06048952E-05 0.09882517E-09-0.07351179E-13    2
 0.06590415E+06-0.11994418E+01 0.03050667E+02 0.06051674E-01-0.04956634E-04    3
 0.02804159E-07-0.08193332E-11 0.06630011E+06 0.05954361E+02                   4
C2H2                121386C   2H   2          G  0300.00   5000.00  1000.00      1
 0.04436770E+02 0.05376039E-01-0.01912816E-04 0.03286379E-08-0.02156709E-12    2
 0.02566766E+06-0.02800338E+02 0.02013562E+02 0.15190446E-01-0.16163189E-04    3
 0.09078992E-07-0.01912746E-10 0.02612444E+06 0.08805378E+02                   4
C2H3                12787C   2H   3          G  0300.00   5000.00  1000.00      1
 0.05933468E+02 0.04017745E-01-0.03966739E-05-0.14412666E-09 0.02378643E-12    2
 0.03185434E+06-0.08530313E+02 0.02459276E+02 0.07371476E-01 0.02109872E-04    3
-0.13216421E-08-0.11847838E-11 0.03335225E+06 0.11556202E+02                   4
C2H4                121286C   2H   4          G  0300.00   5000.00  1000.00      1
 0.03528418E+02 0.11485185E-01-0.04418385E-04 0.07844600E-08-0.05266848E-12    2
 0.04428288E+05 0.02230389E+02-0.08614880E+01 0.02796162E+00-0.03388677E-03    3
 0.02785152E-06-0.09737879E-10 0.05573046E+05 0.02421148E+03                   4
C2H5                12387C   2H   5          G  0300.00   5000.00  1000.00      1
 0.07190480E+02 0.06484077E-01-0.06428064E-05-0.02347879E-08 0.03880877E-12    2
 0.10674549E+05-0.14780892E+02 0.02690701E+02 0.08719133E-01 0.04419838E-04    3
 0.09338703E-08-0.03927773E-10 0.12870404E+05 0.12138195E+02                   4
C2H6                121686C   2H   6          G  0300.00   4000.00  1000.00      1
 0.04825938E+02 0.13840429E-01-0.04557258E-04 0.06724967E-08-0.03598161E-12    2
-0.12717793E+05-0.05239506E+02 0.14625388E+01 0.15494667E-01 0.05780507E-04    3
-0.12578319E-07 0.04586267E-10-0.11239176E+05 0.14432295E+02                   4
C2HCL               112989C   2H   1CL  1     G  0300.00   5000.00  1000.00      1
 0.06295372E+02 0.03883113E-01-0.15060494E-05 0.02700003E-08-0.01830213E-12    2
 0.02357278E+06-0.08137063E+02 0.03618443E+02 0.13319791E-01-0.13218222E-04    3
 0.06092023E-07-0.08879026E-11 0.02415385E+06 0.05050645E+02                   4
C2N                 121286C   2N   1          G  0300.00   5000.00  1000.00      1
 0.06151561E+02 0.15116498E-02-0.06629362E-05 0.12861485E-09-0.09160830E-13    2
 0.06484318E+06-0.08177850E+02 0.03498544E+02 0.08554433E-01-0.06288697E-04    3
 0.08638478E-08 0.04915996E-11 0.06556611E+06 0.05548374E+02                   4
C2N2                121286C   2N   2          G  0300.00   5000.00  1000.00      1
 0.06548002E+02 0.03984707E-01-0.16342164E-05 0.03038596E-08-0.02111069E-12    2
 0.03490716E+06-0.09735790E+02 0.04265459E+02 0.11922569E-01-0.13420142E-04    3
 0.09192297E-07-0.02778941E-10 0.03547887E+06 0.01713212E+02                   4
C2O                 121286C   2O   1          G  0300.00   5000.00  1000.00      1
 0.04849809E+02 0.02947585E-01-0.10907286E-05 0.01792562E-08-0.11157585E-13    2
 0.03282055E+06-0.06453225E+01 0.03368850E+02 0.08241803E-01-0.08765145E-04    3
 0.05569262E-07-0.15400086E-11 0.03317081E+06 0.06713314E+02                   4
C3                  121286C   3            G  0300.00   5000.00  1000.00      1
 0.03803709E+02 0.02253566E-01-0.07704534E-05 0.13162939E-09-0.08694264E-13    2
 0.09736135E+06 0.06128062E+02 0.04345527E+02 0.12644661E-02-0.04652557E-04    3
 0.08695855E-07-0.04243535E-10 0.09731403E+06 0.03519437E+02                   4
C3H2                121686C   3H   2          G  0300.00   5000.00  1000.00      1
 0.06530853E+02 0.05870316E-01-0.01720776E-04 0.02127498E-08-0.08291910E-13    2
 0.05115213E+06-0.11227278E+02 0.02691077E+02 0.14803664E-01-0.03250551E-04    3
-0.08644363E-07 0.05284877E-10 0.05219072E+06 0.08757391E+02                   4
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C3H4               40687C   3H   4          G  0300.00   5000.00  1000.00      1
 0.05729144E+02 0.12368045E-01-0.04805626E-04 0.08601364E-08-0.05812802E-12    2
 0.02012984E+06-0.09448668E+02-0.02131968E+01 0.03358713E+00-0.03804870E-03    3
 0.02745838E-06-0.08690044E-10 0.02162048E+06 0.02029392E+03                   4
C3H4C              121686C   3H   4          G  0300.00   5000.00  1000.00      1
 0.06699993E+02 0.10357372E-01-0.03455116E-04 0.05065295E-08-0.02668227E-12    2
 0.03019905E+06-0.13391933E+02-0.02462104E+00 0.02319721E+00-0.01847435E-04    3
-0.15927594E-07 0.08684615E-10 0.03233413E+06 0.02271659E+03                   4
C3H4P              40687C   3H   4          G  0300.00   5000.00  1000.00      1
 0.05511034E+02 0.12469562E-01-0.04814164E-04 0.08573770E-08-0.05771561E-12    2
 0.01961967E+06-0.10794748E+02 0.06271447E+01 0.03116179E+00-0.03747663E-03    3
 0.02964117E-06-0.09987381E-10 0.02083492E+06 0.13468796E+02                   4
C3H6               120186C   3H   6          G  0300.00   5000.00  1000.00      1
 0.06732257E+02 0.14908336E-01-0.04949899E-04 0.07212022E-08-0.03766204E-12    2
-0.09235703E+04-0.13313348E+02 0.14933071E+01 0.02092517E+00 0.04486794E-04    3
-0.16689121E-07 0.07158146E-10 0.10748264E+04 0.16145340E+02                   4
C3H8               120186C   3H   8          G  0300.00   5000.00  1000.00      1
 0.07525217E+02 0.01889034E+00-0.06283924E-04 0.09179373E-08-0.04812410E-12    2
-0.16464548E+05-0.01784390E+03 0.08969208E+01 0.02668986E+00 0.05431425E-04    3
-0.02126000E-06 0.09243330E-10-0.13954918E+05 0.01935533E+03                   4
C3O2               121286C   3O   2          G  0300.00   5000.00  1000.00      1
 0.08098897E+02 0.05560039E-01-0.02312264E-04 0.04340709E-08-0.03036387E-12    2
-0.14214353E+05-0.15219745E+02 0.04018127E+02 0.01836660E+00-0.01907148E-03    3
 0.11855871E-07-0.03418747E-10-0.13128236E+05 0.05582083E+02                   4
C4                 121286C   4            G  0300.00   5000.00  1000.00      1
 0.06500180E+02 0.04228632E-01-0.01790717E-04 0.03404812E-08-0.02403978E-12    2
 0.11434008E+06-0.11488894E+02 0.02343028E+02 0.16429811E-01-0.15279858E-04    3
 0.07343826E-07-0.15822743E-11 0.11545384E+06 0.09826204E+02                   4
C4H                121686C   4H   1          G  0300.00   5000.00  1000.00      1
 0.06242882E+02 0.06193682E-01-0.02085931E-04 0.03082203E-08-0.16364826E-13    2
 0.07568019E+06-0.07210806E+02 0.05023247E+02 0.07092375E-01-0.06073762E-07    3
-0.02275752E-07 0.08086994E-11 0.07623812E+06-0.06942594E+00                   4
C4H2               121686C   4H   2          G  0300.00   5000.00  1000.00      1
 0.09031407E+02 0.06047252E-01-0.01948788E-04 0.02754863E-08-0.13856080E-13    2
 0.05294735E+06-0.02385067E+03 0.04005191E+02 0.01981000E+00-0.09865877E-04    3
-0.06635158E-07 0.06077413E-10 0.05424065E+06 0.01845736E+02                   4
C4H6               120186C   4H   6          G  0300.00   5000.00  1000.00      1
 0.08046583E+02 0.16485251E-01-0.05522227E-04 0.08123593E-08-0.04295078E-12    2
 0.13701305E+05-0.01800457E+03 0.03197108E+02 0.02025591E+00 0.06510192E-04    3
-0.16584423E-07 0.06400282E-10 0.15715203E+05 0.09895660E+02                   4
C4H8               120386C   4H   8          G  0300.00   5000.00  1000.00      1
 0.02053584E+02 0.03435050E+00-0.15883196E-04 0.03308966E-07-0.02536104E-11    2
-0.02139723E+05 0.15543201E+02 0.11811380E+01 0.03085338E+00 0.05086524E-04    3
-0.02465488E-06 0.11110192E-10-0.01790400E+05 0.02106247E+03                   4
C5                 121286C   5            G  0300.00   5000.00  1000.00      1
 0.08078081E+02 0.05743464E-01-0.02436405E-04 0.04638916E-08-0.03278909E-12    2
 0.11470216E+06-0.01953023E+03 0.02115273E+02 0.02326331E+00-0.02109499E-03    3
 0.09072734E-07-0.15400926E-11 0.11627381E+06 0.10976027E+02                   4
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C5H                 20387C   5H   1          G  0300.00   5000.00  1000.00      1
 0.08695749E+02 0.06054301E-01-0.02016010E-04 0.02892892E-08-0.14700996E-13    2
 0.09031069E+06-0.02101594E+03 0.16348248E+01 0.02509538E+00-0.12066364E-04    3
-0.10465110E-07 0.08809988E-10 0.09212488E+06 0.15121937E+02                   4
C5H12               20387C   5H  12          G  0300.00   4000.00  1000.00      1
 0.16677979E+02 0.02114483E+00-0.03533321E-04-0.05742202E-08 0.15159483E-12    2
-0.02553670E+06-0.06372940E+03 0.01877907E+02 0.04121645E+00 0.12532337E-04    3
-0.03701536E-06 0.15255685E-10-0.02003815E+06 0.01877256E+03                   4
C5H2                20587C   5H   2          G  0300.00   5000.00  1000.00      1
 0.11329175E+02 0.07424056E-01-0.02628188E-04 0.04082541E-08-0.02301332E-12    2
 0.07878706E+06-0.03617117E+03 0.03062321E+02 0.02709998E+00-0.10091697E-04    3
-0.12727451E-07 0.09167219E-10 0.08114969E+06 0.07071078E+02                   4
C5H3                20387C   5H   3          G  0300.00   5000.00  1000.00      1
 0.10787622E+02 0.09539619E-01-0.03206744E-04 0.04733323E-08-0.02512135E-12    2
 0.06392904E+06-0.03005444E+03 0.04328720E+02 0.02352480E+00-0.05856723E-04    3
-0.12154494E-07 0.07726478E-10 0.06588531E+06 0.04173258E+02                   4
C5H6                20387C   5H   6          G  0300.00   5000.00  1000.00      1
 0.09689815E+02 0.01838262E+00-0.06264884E-04 0.09393377E-08-0.05087708E-12    2
 0.11021242E+05-0.03122908E+03-0.03196739E+02 0.04081361E+00 0.06816505E-05    3
-0.03137459E-06 0.15772230E-10 0.15290676E+05 0.03869938E+03                   4
C6H               121686C   6H   1          G  0300.00   5000.00  1000.00      1
 0.11587352E+02 0.07295362E-01-0.02466008E-04 0.03407045E-08-0.14981855E-13    2
 0.10314481E+06-0.03172578E+03 0.04769848E+02 0.02457279E+00-0.07561252E-04    3
-0.14806908E-07 0.09768053E-10 0.10485231E+06 0.03241530E+02                   4
C6H10               20387C   6H  10          G  0300.00   5000.00  1000.00      1
 0.15927771E+02 0.02374412E+00-0.06908672E-04 0.08109777E-08-0.02683122E-12    2
-0.08642656E+05-0.06525186E+03-0.13942280E+01 0.04720693E+00 0.11960419E-04    3
-0.04162895E-06 0.01740335E-09-0.02217790E+05 0.03129603E+03                   4
C6H14               20387C   6H  14          G  0300.00   4000.00  1000.00      1
 0.02280471E+03 0.02097989E+00-0.03530674E-04-0.05466245E-08 0.14789499E-12    2
-0.03073756E+06-0.09583162E+03 0.01836174E+02 0.05098461E+00 0.12595857E-04    3
-0.04428362E-06 0.01872237E-09-0.02292749E+06 0.02088145E+03                   4
C6H2              121686C   6H   2          G  0300.00   5000.00  1000.00      1
 0.12756519E+02 0.08034381E-01-0.02618215E-04 0.03725060E-08-0.01878850E-12    2
 0.08075469E+06-0.04041262E+03 0.05751085E+02 0.02636719E+00-0.11667596E-04    3
-0.10714498E-07 0.08790297E-10 0.08262012E+06-0.04335532E+02                   4
C6H3                20387C   6H   3          G  0300.00   5000.00  1000.00      1
 0.12761181E+02 0.10385573E-01-0.03479192E-04 0.05109733E-08-0.02690965E-12    2
 0.07477706E+06-0.03891745E+03 0.05007089E+02 0.02692851E+00-0.05919865E-04    3
-0.15272335E-07 0.09408310E-10 0.07713200E+06 0.02225621E+02                   4
C6H4                20387C   6H   4          G  0300.00   5000.00  1000.00      1
 0.10062741E+02 0.01690304E+00-0.06473045E-04 0.11240806E-08-0.07307566E-12    2
 0.05645373E+06-0.02969310E+03-0.13004846E+01 0.03866476E+00-0.03643944E-04    3
-0.02668580E-06 0.14509357E-10 0.06002907E+06 0.03124939E+03                   4
C6H5                82489C   6H   5          G  0300.00   4000.00  1000.00      1
 0.15775887E+02 0.09651109E-01-0.09429416E-05-0.05469111E-08 0.10265216E-12    2
 0.03302698E+06-0.06176280E+03 0.11435567E+00 0.03627324E+00 0.11582856E-05    3
-0.02196964E-06 0.08463556E-10 0.03836054E+06 0.02380117E+03                   4
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C6H5(L)             82489C   6H   5          G  0300.00   4000.00  1000.00      1
 0.01721540E+03 0.08621068E-01-0.08221340E-05-0.04752164E-08 0.08844086E-12     2
 0.06385819E+06-0.06139128E+03 0.04854268E+02 0.03031659E+00 0.01742892E-05     3
-0.01811010E-06 0.07392511E-10 0.06798733E+06 0.05854934E+02                    4
C6H5O               82489C   6H   5O   1     G  0300.00   4000.00  1000.00      1
 0.01822638E+03 0.10039851E-01-0.09915668E-05-0.05672804E-08 0.10683716E-12     2
-0.02620846E+05-0.07361390E+03 0.11074965E+01 0.03956945E+00 0.08497295E-05     3
-0.02436311E-06 0.09650659E-10 0.03159672E+05 0.01973496E+03                    4
C6H5OH              82489C   6H   6O   1     G  0300.00   4000.00  1000.00      1
 0.01821632E+03 0.11424269E-01-0.10966843E-05-0.06427442E-08 0.11988930E-12     2
-0.02053664E+06-0.07304233E+03 0.13914556E+01 0.03931957E+00 0.01777096E-04     3
-0.02277673E-06 0.08309659E-10-0.14721809E+05 0.01917813E+03                    4
C6H6                20387C   6H   6          G  0300.00   5000.00  1000.00      1
 0.12910740E+02 0.01723296E+00-0.05024210E-04 0.05893497E-08-0.01947521E-12     2
 0.03664511E+05-0.05002699E+03-0.03138012E+02 0.04723103E+00-0.02962207E-04     3
-0.03262819E-06 0.01718691E-09 0.08890031E+05 0.03657573E+03                    4
C6H7                82489C   6H   7          G  0300.00   4000.00  1000.00      1
 0.01755221E+03 0.12270795E-01-0.11857424E-05-0.06959661E-08 0.13013259E-12     2
 0.16245813E+05-0.07166588E+03 0.04639166E+01 0.03975928E+00 0.02529095E-04     3
-0.02223792E-06 0.07557053E-10 0.02225169E+06 0.02235387E+03                    4
C8H                 121686C  8H   1          G  0300.00   5000.00  1000.00      1
 0.14749907E+02 0.09931501E-01-0.03374841E-04 0.04687592E-08-0.02073536E-12     2
 0.13994481E+06-0.04892689E+03 0.04489507E+02 0.03521521E+00-0.10193898E-04     3
-0.02197024E-06 0.14214164E-10 0.14259919E+06 0.03996225E+02                    4
C8H2                121686C  8H   2          G  0300.00   5000.00  1000.00      1
 0.15680213E+02 0.11154614E-01-0.03724372E-04 0.05197891E-08-0.02375550E-12     2
 0.10811225E+06-0.05571437E+03 0.04630427E+02 0.03937080E+00-0.11480348E-04     3
-0.02562213E-06 0.16707913E-10 0.11082850E+06 0.08077425E+01                    4
CCL                 112989C  1CL  1          G  0300.00   5000.00  1000.00      1
 0.04072804E+02 0.05508787E-02-0.02319334E-05 0.04669038E-09-0.03236856E-13     2
 0.05909198E+06 0.03481073E+02 0.03188782E+02 0.02965197E-01-0.02305370E-04     3
 0.04866913E-08 0.09990141E-12 0.05932937E+06 0.08037628E+02                    4
CCL2                112989C  1CL  2          G  0300.00   5000.00  1000.00      1
 0.03501741E+02 0.05749397E-01-0.02589721E-04 0.04783950E-08-0.03188271E-12     2
 0.02763633E+06 0.10829469E+02 0.02651916E+02 0.15169552E-01-0.02230162E-03     3
 0.15041039E-07-0.03452951E-10 0.02739027E+06 0.13136703E+02                    4
CCL3                112989C  1CL  3          G  0300.00   5000.00  1000.00      1
 0.08639372E+02 0.15880909E-02-0.07176410E-05 0.14271238E-09-0.10407368E-13     2
 0.06701065E+05-0.14518221E+02 0.04866162E+02 0.11903691E-01-0.07849049E-04     3
-0.14484371E-08 0.02169760E-10 0.07655364E+05 0.04781636E+02                    4
CCL4                112989C  1CL  4          G  0300.00   5000.00  1000.00      1
 0.11369968E+02 0.01933276E-01-0.08832003E-05 0.01770067E-08-0.12982896E-13     2
-0.15283466E+05-0.02874324E+03 0.06286815E+02 0.15997799E-01-0.10203526E-04     3
-0.03043311E-07 0.03546287E-10-0.14032573E+05-0.02850812E+02                    4
CH                  121286C  1H   1          G  0300.00   5000.00  1000.00      1
 0.02196223E+02 0.02340381E-01-0.07058201E-05 0.09007582E-09-0.03855040E-13     2
 0.07086723E+06 0.09178373E+02 0.03200202E+02 0.02072875E-01-0.05134431E-04     3
 0.05733890E-07-0.01955533E-10 0.07045259E+06 0.03331587E+02                    4
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CH+               121286C   1H   1E  -1     G  0300.00   5000.00  1000.00      1
 0.02753358E+02 0.15528998E-02-0.05368453E-05 0.08921772E-09-0.05416801E-13    2
 0.01948467E+07 0.04654892E+02 0.03327207E+02 0.13470505E-02-0.03895861E-04    3
 0.05129390E-07-0.02054575E-10 0.01946452E+07 0.14084738E+01                   4
CH2               120186C   1H   2          G  0250.00   4000.00  1000.00      1
 0.03636407E+02 0.01933056E-01-0.01687016E-05-0.10098994E-09 0.01808255E-12    2
 0.04534134E+06 0.02156560E+02 0.03762237E+02 0.11598191E-02 0.02489585E-05    3
 0.08800836E-08-0.07332435E-11 0.04536790E+06 0.01712577E+02                   4
CH2(S)             31287C   1H   2          G  0300.00   4000.00  1000.00      1
 0.03552888E+02 0.02066788E-01-0.01914116E-05-0.11046733E-09 0.02021349E-12    2
 0.04984975E+06 0.01686570E+02 0.03971265E+02-0.01699088E-02 0.10253689E-05    3
 0.02492550E-07-0.01981266E-10 0.04989367E+06 0.05753207E+00                   4
CH2CHCCH           82489C   4H   4          G  0300.00   4000.00  1000.00      1
 0.10697773E+02 0.06982014E-01-0.06567747E-05-0.03884517E-08 0.07200946E-12    2
 0.03034803E+06-0.03128430E+03 0.03233893E+02 0.01865634E+00 0.12703205E-05    3
-0.09410096E-07 0.02956110E-10 0.03301097E+06 0.09922676E+02                   4
CH2CHCCH2          82489C   4H   5          G  0300.00   4000.00  1000.00      1
 0.11997762E+02 0.07990580E-01-0.08098172E-05-0.04568733E-08 0.08636911E-12    2
 0.03228493E+06-0.03528494E+03 0.03879443E+02 0.01997663E+00 0.01872777E-04    3
-0.09306953E-07 0.02386116E-10 0.03526859E+06 0.09842152E+02                   4
CH2CHCH2           82489C   3H   5          G  0300.00   4000.00  1000.00      1
 0.09651539E+02 0.08075596E-01-0.07965424E-05-0.04650696E-08 0.08603281E-12    2
 0.15300955E+05-0.02686773E+03 0.02276486E+02 0.01985564E+00 0.11238421E-05    3
-0.10145757E-07 0.03441342E-10 0.01789496E+06 0.13725151E+02                   4
CH2CHCHCH          82489C   4H   5          G  0300.00   4000.00  1000.00      1
 0.12865971E+02 0.07943369E-01-0.08626466E-05-0.04655635E-08 0.08951131E-12    2
 0.03783552E+06-0.04182502E+03 0.02995240E+02 0.02288456E+00 0.01975471E-04    3
-0.11482454E-07 0.03197823E-10 0.04142218E+06 0.12894539E+02                   4
CH2CHCHCH2         120189C   4H   6          G  0300.00   4000.00  1000.00      1
 0.12544366E+02 0.09596525E-01-0.09187012E-05-0.05429640E-08 0.10053636E-12    2
 0.08597330E+05-0.04217450E+03 0.01931624E+02 0.02479030E+00 0.03018071E-04    3
-0.11546856E-07 0.02586623E-10 0.12554682E+05 0.01701999E+03                   4
CH2CL2             112989C   1H   2CL  2     G  0300.00   5000.00  1000.00      1
 0.05917327E+02 0.06762395E-01-0.02676163E-04 0.04856687E-08-0.03316973E-12    2
-0.13859256E+05-0.03877739E+02 0.14232844E+01 0.02116658E+00-0.02178088E-03    3
 0.13458726E-07-0.03811649E-10-0.12686636E+05 0.01893445E+03                   4
CH2CO              121686C   2H   2O   1     G  0300.00   5000.00  1000.00      1
 0.06038817E+02 0.05804840E-01-0.01920953E-04 0.02794484E-08-0.14588676E-13    2
-0.08583402E+05-0.07657581E+02 0.02974970E+02 0.12118712E-01-0.02345045E-04    3
-0.06466685E-07 0.03905649E-10-0.07632636E+05 0.08673553E+02                   4
CH2F2              82489C   1H   2F   2     G  0300.00   5000.00  1000.00      1
 0.04730052E+02 0.07997300E-01-0.03186045E-04 0.05801159E-08-0.03967925E-12    2
-0.05637288E+06-0.04954843E+01 0.03669433E+01 0.02168917E+00-0.02441912E-03    3
 0.01942310E-06-0.06978343E-10-0.05510102E+06 0.02202214E+03                   4
CH2HCO             1201860   1H   3C   2     G  0300.00   5000.00  1000.00      1
 0.05975670E+02 0.08130591E-01-0.02743624E-04 0.04070304E-08-0.02176017E-12    2
 0.04903218E+04-0.05045251E+02 0.03409062E+02 0.10738574E-01 0.01891492E-04    3
-0.07158583E-07 0.02867385E-10 0.15214766E+04 0.09558290E+02                   4
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CH2O              121286C   1H   2O   1     G  0300.00   5000.00  1000.00      1
 0.02995606E+02 0.06681321E-01-0.02628954E-04 0.04737153E-08-0.03212517E-12    2
-0.15320369E+05 0.06912572E+02 0.16527311E+01 0.12631439E-01-0.01888168E-03    3
 0.02050031E-06-0.08413237E-10-0.14865404E+05 0.13784820E+02                   4
CH2OH             120186H   3C   1O   1     G  0250.00   4000.00  1000.00      1
 0.06327520E+02 0.03608270E-01-0.03201547E-05-0.01938750E-08 0.03509704E-12    2
-0.04474509E+05-0.08329365E+02 0.02862628E+02 0.10015273E-01-0.05285435E-05    3
-0.05138539E-07 0.02246041E-10-0.03349678E+05 0.10397938E+02                   4
CH3               121286C   1H   3           G  0300.00   5000.00  1000.00      1
 0.02844051E+02 0.06137974E-01-0.02230345E-04 0.03785161E-08-0.02452159E-12    2
 0.16437809E+05 0.05452697E+02 0.02430442E+02 0.11124099E-01-0.01680220E-03    3
 0.16218288E-07-0.05864952E-10 0.16423781E+05 0.06789794E+02                   4
CH3CC              82489C   3H   3           G  0300.00   4000.00  1000.00      1
 0.07640221E+02 0.05233556E-01-0.05053635E-05-0.02919772E-08 0.05445700E-12    2
 0.05909763E+06-0.16295735E+02 0.03798751E+02 0.08749062E-01 0.02523014E-04    3
-0.15293730E-08-0.14105619E-11 0.06077425E+06 0.05989223E+02                   4
CH3CCCH2           82489C   4H   5           G  0300.00   4000.00  1000.00      1
 0.11565059E+02 0.08030297E-01-0.07649450E-05-0.04476533E-08 0.08313260E-12    2
 0.03256813E+06-0.03014066E+03 0.05068450E+02 0.15717475E-01 0.02968975E-04    3
-0.04990586E-07-0.02984224E-11 0.03518855E+06 0.06791893E+02                   4
CH3CCCH3           120189C   4H   6           G  0300.00   4000.00  1000.00      1
 0.11336582E+02 0.10057637E-01-0.09511323E-05-0.05660496E-08 0.10494509E-12    2
 0.15476594E+05-0.03350866E+03 0.04077105E+02 0.01703158E+00 0.04707490E-04    3
-0.03767239E-07-0.02066962E-10 0.01859756E+06 0.08444801E+02                   4
CH3CCH2            82489C   3H   5           G  0300.00   4000.00  1000.00      1
 0.09101018E+02 0.07964167E-01-0.07884945E-05-0.04562036E-08 0.08529212E-12    2
 0.02670680E+06-0.02150559E+03 0.03385811E+02 0.14045337E-01 0.03204127E-04    3
-0.03824120E-07-0.09053742E-11 0.02909066E+06 0.11266487E+02                   4
CH3CH2CCH          120189C   4H   6           G  0300.00   4000.00  1000.00      1
 0.12006946E+02 0.09576069E-01-0.08995018E-05-0.05369808E-08 0.09934174E-12    2
 0.01729419E+06-0.03802692E+03 0.03726043E+02 0.02053492E+00 0.03021439E-04    3
-0.08131812E-07 0.10952799E-11 0.02048821E+06 0.08538826E+02                   4
CH3CHCH            82489C   3H   5           G  0300.00   4000.00  1000.00      1
 0.09209764E+02 0.07871412E-01-0.07724522E-05-0.04497357E-08 0.08377272E-12    2
 0.02853967E+06-0.02232369E+03 0.03161863E+02 0.15180997E-01 0.02722659E-04    3
-0.05177112E-07 0.05435286E-12 0.03095547E+06 0.11979733E+02                   4
CH3CL              112989C   1H   3CL  1     G  0300.00   5000.00  1000.00      1
 0.03633875E+02 0.08664625E-01-0.03343871E-04 0.05950130E-08-0.04001401E-12    2
-0.11776588E+05 0.04430651E+02 0.04621901E+01 0.02068247E+00-0.02553133E-03    3
 0.02160310E-06-0.07706816E-10-0.10936672E+05 0.02032976E+03                   4
CH3CO              120186C   2H   3O   1     G  0300.00   5000.00  1000.00      1
 0.05612279E+02 0.08449886E-01-0.02854147E-04 0.04238376E-08-0.02268403E-12    2
-0.05187863E+05-0.03274949E+02 0.03125278E+02 0.09778220E-01 0.04521448E-04    3
-0.09009462E-07 0.03193717E-10-0.04108507E+05 0.11228854E+02                   4
CH3F               82489C   1H   3F   1     G  0300.00   5000.00  1000.00      1
 0.03014978E+02 0.09314397E-01-0.03611697E-04 0.06443728E-08-0.04339594E-12    2
-0.02977838E+06 0.06323815E+02 0.02600910E+01 0.02000787E+00-0.02662584E-03    3
 0.02561176E-06-0.09935237E-10-0.02896232E+06 0.02031799E+03                   4
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CH3HCO            120186C   2O   1H   4      G  0300.00   5000.00  1000.00      1
 0.05868650E+02 0.10794241E-01-0.03645530E-04 0.05412912E-08-0.02896844E-12    2
-0.02264568E+06-0.06012946E+02 0.02505695E+02 0.13369907E-01 0.04671953E-04    3
-0.11281401E-07 0.04263566E-10-0.02124588E+06 0.13350887E+02                   4
CH3O              121686C   1H   3O   1      G  0300.00   3000.00  1000.00      1
 0.03770799E+02 0.07871497E-01-0.02656384E-04 0.03944431E-08-0.02112616E-12    2
 0.12783252E+03 0.02929575E+02 0.02106204E+02 0.07216595E-01 0.05338472E-04    3
-0.07377636E-07 0.02075610E-10 0.09786011E+04 0.13152177E+02                   4
CH3OH             121686C   1H   4O   1      G  0300.00   5000.00  1000.00      1
 0.04029061E+02 0.09376593E-01-0.03050254E-04 0.04358793E-08-0.02224723E-12    2
-0.02615791E+06 0.02378195E+02 0.02660115E+02 0.07341508E-01 0.07170050E-04    3
-0.08793194E-07 0.02390570E-10-0.02535348E+06 0.11232631E+02                   4
CH3SICL3          112989C   1H   3CL  3SI  1G  0300.00   1500.00  1000.00      1
 0.11803988E+02 0.07642902E-01-0.09493348E-06-0.01852654E-07 0.05302190E-11    2
-0.06773651E+06-0.02794492E+03 0.04637712E+02 0.03733016E+00-0.04798528E-03    3
 0.03353132E-06-0.09484405E-10-0.06629348E+06 0.06524867E+02                   4
CH4               121286C   1H   4           G  0300.00   5000.00  1000.00      1
 0.01683478E+02 0.10237236E-01-0.03875128E-04 0.06785585E-08-0.04503423E-12    2
-0.10080787E+05 0.09623395E+02 0.07787415E+01 0.01747668E+00-0.02783409E-03    3
 0.03049708E-06-0.12239307E-10-0.09825229E+05 0.13722195E+02                   4
CHCL              112989C   1H   1CL  1      G  0300.00   5000.00  1200.00      1
 0.03216518E+02 0.05976969E-01-0.02918238E-04 0.05912801E-08-0.04297945E-12    2
 0.03879839E+06 0.07793842E+02 0.02781262E+02 0.07805384E-01-0.10637111E-04    3
 0.10654407E-07-0.03916796E-10 0.03916144E+06 0.10455153E+02                   4
CHCL3             112989C   1H   1CL  3      G  0300.00   5000.00  1000.00      1
 0.08523544E+02 0.04480142E-01-0.01837282E-04 0.03424891E-08-0.02387283E-12    2
-0.15461167E+05-0.15056193E+02 0.03437633E+02 0.01941496E+00-0.16494730E-04    3
 0.05196545E-07-0.06939614E-12-0.14161262E+05 0.10863299E+02                   4
CHF                82489C   1H   1F   1      G  0300.00   5000.00  1000.00      1
 0.04242812E+02 0.02066316E-01-0.06527951E-05 0.13887000E-09-0.12133360E-13    2
 0.13559817E+05 0.01680196E+02 0.03029060E+02 0.04850873E-01-0.04971678E-04    3
 0.05277968E-07-0.02403154E-10 0.14014348E+05 0.08324101E+02                   4
CHF3               82489C   1H   1F   3      G  0300.00   5000.00  1000.00      1
 0.06834333E+02 0.06248730E-01-0.02575750E-04 0.04809112E-08-0.03352074E-12    2
-0.08663771E+06-0.10627405E+02 0.08725142E+01 0.02308431E+00-0.02123718E-03    3
 0.11144284E-07-0.02909229E-10-0.08496391E+06 0.02021498E+03                   4
CL                 42189CL  1               G  0300.00   5000.00  1000.00      1
 0.02920236E+02-0.03597985E-02 0.12942943E-06-0.02162776E-09 0.13765171E-14    2
 0.13713381E+05 0.03262690E+02 0.02381576E+02 0.08891079E-02 0.04070475E-05    3
-0.02168943E-07 0.11608274E-11 0.13839987E+05 0.06021817E+02                   4
CL2                42189CL  2               G  0300.00   5000.00  1000.00      1
 0.04274586E+02 0.03717336E-02-0.01893489E-05 0.05337465E-09-0.05057602E-13    2
-0.13311486E+04 0.02256946E+02 0.03439587E+02 0.02870774E-01-0.02385870E-04    3
 0.02892918E-08 0.02915057E-11-0.11317875E+04 0.06471359E+02                   4
CN                 121286C   1N   1           G  0300.00   5000.00  1000.00      1
 0.03720119E+02 0.15183506E-03 0.01987381E-05-0.03798371E-09 0.13282296E-14    2
 0.05111626E+06 0.02888597E+02 0.03663204E+02-0.11565290E-02 0.02163409E-04    3
 0.01854208E-08-0.08214695E-11 0.05128118E+06 0.03739015E+02                   4
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CN+               121286C   1N   1E  -1     G  0300.00   5000.00  1000.00      1
 0.03701463E+02 0.07482931E-02-0.01790173E-05 0.02366368E-09-0.14370368E-14    2
 0.02155966E+07 0.04108678E+02 0.03118657E+02 0.15532581E-02-0.09487764E-05    3
 0.14795005E-08-0.09096763E-11 0.02158512E+07 0.07456254E+02                   4
CN-               121286C   1N   1E   1     G  0300.00   5000.00  1000.00      1
 0.02981276E+02 0.14647728E-02-0.05672737E-05 0.10176226E-09-0.06870930E-13    2
 0.06346098E+05 0.06171693E+02 0.03278995E+02 0.14641916E-02-0.03925899E-04    3
 0.05629874E-07-0.02473496E-10 0.06279509E+05 0.04568972E+02                   4
CN2               121686C   1N   2           G  0300.00   5000.00  1000.00      1
 0.05567064E+02 0.02100501E-01-0.09010517E-05 0.01718571E-08-0.12062552E-13    2
 0.05489968E+06-0.05630054E+02 0.03039963E+02 0.08812105E-01-0.07605508E-04    3
 0.03554357E-07-0.08746100E-11 0.05563268E+06 0.07555298E+02                   4
CNN               121286C   1N   2           G  0300.00   5000.00  1000.00      1
 0.04785930E+02 0.02559553E-01-0.10031326E-05 0.01807148E-08-0.12273827E-13    2
 0.06870411E+06-0.02953957E+01 0.03524436E+02 0.07271923E-01-0.08272698E-04    3
 0.05628704E-07-0.16415759E-11 0.06899647E+06 0.05932444E+02                   4
CO                121286C   1O   1           G  0300.00   5000.00  1000.00      1
 0.03025078E+02 0.14426885E-02-0.05630827E-05 0.10185813E-09-0.06910951E-13    2
-0.14268350E+05 0.06108217E+02 0.03262451E+02 0.15119409E-02-0.03881755E-04    3
 0.05581944E-07-0.02474951E-10-0.14310539E+05 0.04848897E+02                   4
CO2               121286C   1O   2           G  0300.00   5000.00  1000.00      1
 0.04453623E+02 0.03140168E-01-0.12784105E-05 0.02393996E-08-0.16690333E-13    2
-0.04896696E+06-0.09553959E+01 0.02275724E+02 0.09922072E-01-0.10409113E-04    3
 0.06866686E-07-0.02117280E-10-0.04837314E+06 0.10188488E+02                   4
CO2-              121286C   1O   2E  1     G  0300.00   5000.00  1000.00      1
 0.04610574E+02 0.02532962E-01-0.10701653E-05 0.02026770E-08-0.14249581E-13    2
-0.05479881E+06 0.14496295E+01 0.02637077E+02 0.07803230E-01-0.08196187E-04    3
 0.06537897E-07-0.02520220E-10-0.05416772E+06 0.11889549E+02                   4
COS               121286C   1O   1S  1     G  0300.00   5000.00  1000.00      1
 0.05191924E+02 0.02506123E-01-0.10243963E-05 0.01943914E-08-0.13707999E-13    2
-0.01846210E+06-0.02825755E+02 0.02858530E+02 0.09515458E-01-0.08884915E-04    3
 0.04220994E-07-0.08557340E-11-0.01785144E+06 0.09081989E+02                   4
CS                121686C   1S   1           G  0300.00   5000.00  1000.00      1
 0.03737430E+02 0.08180451E-02-0.03178918E-05 0.05356801E-09-0.02886194E-13    2
 0.03247725E+06 0.03576556E+02 0.02938623E+02 0.02724351E-01-0.02397706E-04    3
 0.01689500E-07-0.06665050E-11 0.03273992E+06 0.07848720E+02                   4
CS2               121286C   1S   2           G  0300.00   5000.00  1000.00      1
 0.05930515E+02 0.01813645E-01-0.07492172E-05 0.14458920E-09-0.10326380E-13    2
 0.12051166E+05-0.06093909E+02 0.03566139E+02 0.08374927E-01-0.06835704E-04    3
 0.02091214E-07-0.06737193E-12 0.12688482E+05 0.06085967E+02                   4
E                 120186E   1               G  0300.00   5000.00  1000.00      1
 0.02500000E+02 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-0.07453749E+04-0.11734026E+02 0.02500000E+02 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-0.07453750E+04-0.11734026E+02                   4
F                 121286F   1               G  0300.00   5000.00  1000.00      1
 0.02687459E+02-0.02010358E-02 0.08597957E-06-0.16449738E-10 0.11661605E-14    2
 0.08722883E+05 0.03882212E+02 0.02913904E+02-0.07336339E-02 0.05571015E-05    3
-0.02666871E-08 0.08643255E-12 0.08651201E+05 0.02677115E+02                   4
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F2                121286F   2               G  0300.00   5000.00  1000.00      1
 0.04018308E+02 0.06221479E-02-0.02420845E-05 0.04742076E-09-0.03418141E-13    2
-0.13007128E+04 0.11263273E+01 0.02940287E+02 0.03491491E-01-0.02458207E-04    3
 0.01837073E-08 0.02850916E-11-0.10104296E+04 0.06694194E+02                   4
F2SINH             42489SI  1N   1F   2H   1G  0300.00   3000.00  1000.00      1
 0.10048301E+02 0.01983144E-01-0.02703168E-05-0.01767852E-08 0.04444367E-12    2
-0.07739741E+06-0.02303888E+03 0.04951547E+02 0.13296361E-01-0.02098648E-04    3
-0.10072757E-07 0.05552285E-10-0.07597540E+06 0.03690891E+02                   4
F3SIN              22790F   3SI  1N   1     G  0300.00   4000.00  1000.00      1
 0.11512423E+02 0.11150295E-02-0.16054655E-06-0.05271933E-09 0.11608998E-13    2
-0.10459191E+06-0.02981224E+03 0.06028419E+02 0.12786807E-01-0.01878856E-04    3
-0.09695426E-07 0.05184847E-10-0.10299499E+06-0.08217830E+01                   4
FNNF               42489F   2N   2           G  0300.00   3000.00  1000.00      1
 0.07255211E+02 0.02274409E-01-0.02793346E-05-0.02203843E-08 0.05359234E-12    2
 0.06360352E+05-0.10942477E+02 0.03127143E+02 0.10571342E-01-0.09746113E-05    3
-0.07208357E-07 0.03567978E-10 0.07615830E+05 0.11074648E+02                   4
FNO3               121286F   1N   10   3     G  0300.00   5000.00  1000.00      1
 0.09176275E+02 0.04219072E-01-0.01835575E-04 0.03553717E-08-0.02541078E-12    2
-0.02118638E+05-0.01934397E+03 0.02985786E+02 0.02094642E+00-0.16527329E-04    3
 0.04318770E-07 0.16607836E-12-0.04237215E+04 0.12667929E+02                   4
FO                 121286F   1O   1           G  0300.00   5000.00  1000.00      1
 0.03913735E+02 0.07210714E-02-0.02796614E-05 0.05337821E-09-0.03720183E-13    2
 0.11801406E+05 0.03346367E+02 0.02879578E+02 0.03399121E-01-0.02572854E-04    3
 0.07422381E-08-0.04328053E-12 0.12096633E+05 0.08738887E+02                   4
FO2                121286F   1O   2           G  0300.00   5000.00  1000.00      1
 0.05678971E+02 0.14424551E-02-0.06229546E-05 0.11996118E-09-0.08543416E-13    2
-0.03861836E+04-0.01941811E+02 0.03872542E+02 0.06409974E-01-0.05517784E-04    3
 0.02232770E-07-0.03876157E-11 0.11570760E+03 0.07406949E+02                   4
FSIN               42489SI  1N   1F   1     G  0300.00   3000.00  1000.00      1
 0.06269572E+02 0.06747867E-02-0.12419759E-06-0.04970158E-09 0.14244521E-13    2
 0.02533350E+06-0.04201141E+02 0.04269969E+02 0.05298358E-01-0.11038015E-05    3
-0.03962805E-07 0.02282982E-10 0.02587238E+06 0.06215038E+02                   4
GA                 62987GA  1               G  0300.00   1500.00  0600.00      1
 0.02679919E+02 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.03368804E+06 0.06788109E+02 0.02679919E+02 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.03368803E+06 0.06788109E+02                   4
GA2H6              62987GA  2H   6           G  0300.00   1500.00  0600.00      1
 0.06016247E+02 0.01788370E+00-0.12042288E-06-0.06487881E-07 0.02075367E-10    2
 0.13125479E+05-0.05228029E+02-0.03914560E+02 0.04965434E+00 0.07401903E-04    3
-0.11241373E-06 0.08726339E-09 0.14930795E+05 0.04274882E+03                   4
GAAS               62987GA  1AS  1           G  0300.00   1500.00  0600.00      1
 0.04471149E+02 0.04238449E-02-0.02279404E-05-0.04441172E-10 0.02618952E-12    2
 0.04313359E+06 0.06212470E+02 0.03967473E+02 0.02318966E-01-0.11454521E-05    3
-0.03411430E-07 0.03365821E-10 0.04321919E+06 0.08599628E+02                   4
GAAS(3,C)          62987GA  3AS  3           G  0300.00   1500.00  0600.00      1
 0.14852467E+02 0.02959435E-01-0.07124246E-05-0.05316048E-08 0.12873211E-12    2
 0.11912617E+06-0.03514144E+03 0.14701892E+02 0.03827728E-01-0.02945747E-04    3
 0.02465370E-07-0.15205979E-11 0.11914958E+06-0.03445955E+03                   4
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GAAS(3,L)          62987GA  3AS  3          G  0300.00   1500.00  0600.00      1
 0.13568498E+02 0.02802435E-01-0.07969918E-05-0.06437098E-08 0.15602546E-12    2
 0.12480055E+06-0.13810628E+02 0.13412763E+02 0.03617689E-01-0.02726208E-04    3
 0.01877183E-07-0.12591780E-11 0.12482649E+06-0.13091947E+02                   4
GAAS(5,C)          62987GA  5AS  5          G  0300.00   1500.00  0600.00      1
 0.02573672E+03 0.05523956E-01-0.12034680E-05-0.10437431E-08 0.02528930E-11    2
 0.01721381E+07-0.08254488E+03 0.02546511E+03 0.07014337E-01-0.04881356E-04    3
 0.03825484E-07-0.02450420E-10 0.01721819E+07-0.08130267E+03                   4
GAAS(5,L)          62987GA  5AS  5          G  0300.00   1500.00  0600.00      1
 0.03045793E+03 0.05403151E-01-0.16494765E-05-0.09968843E-08 0.02413154E-11    2
 0.02020691E+07-0.07768010E+03 0.03015255E+03 0.07234394E-01-0.06497993E-04    3
 0.05559584E-07-0.03339653E-10 0.02021150E+07-0.07630866E+03                   4
GAET               62987GA  1C   2H   5     G  0300.00   1500.00  0600.00      1
 0.05932970E+02 0.13424544E-01 0.04110518E-05-0.04286069E-07 0.12387095E-11    2
 0.06504863E+05 0.03090838E+02 0.01846399E+02 0.02592050E+00 0.05522393E-04    3
-0.04977960E-06 0.03654361E-09 0.07264445E+05 0.02294638E+03                   4
GAET2              62987GA  1C   4H  10     G  0300.00   1500.00  0600.00      1
 0.07213832E+02 0.03055227E+00 0.12494508E-05-0.09990274E-07 0.02881965E-10    2
-0.13921194E+04-0.07795098E+00-0.02162930E+02 0.05892512E+00 0.14471449E-04    3
-0.11686023E-06 0.08526654E-09 0.03561840E+04 0.04552626E+03                   4
GAET3              62987GA  1C   6H  15     G  0300.00   1500.00  0600.00      1
 0.08436453E+02 0.04804950E+00 0.02119157E-04-0.15816849E-07 0.04571178E-10    2
-0.13469963E+05-0.06196490E+02-0.06544288E+02 0.09332246E+00 0.02364121E-03    3
-0.01874104E-05 0.13677210E-09-0.10676594E+05 0.06666796E+03                   4
GAH                62987GA  1H   1          G  0300.00   1500.00  0600.00      1
 0.03232142E+02 0.13432469E-02-0.04325498E-06-0.02791841E-08 0.04973590E-12    2
 0.02656059E+06 0.05947896E+02 0.03524579E+02 0.03386213E-02-0.02064013E-05    3
 0.03220998E-07-0.02936132E-10 0.02651074E+06 0.04554066E+02                   4
GAH2               62987GA  1H   2          G  0300.00   1500.00  0600.00      1
 0.03762384E+02 0.03210792E-01 0.02180096E-06-0.08908394E-08 0.02219062E-11    2
 0.01936646E+06 0.05783398E+02 0.03559710E+02 0.03676741E-01 0.06484499E-05    3
-0.03109349E-07 0.15854136E-11 0.01940976E+06 0.06803081E+02                   4
GAH3               62987GA  1H   3          G  0300.00   1500.00  0600.00      1
 0.03345475E+02 0.06399313E-01 0.11229964E-06-0.02065899E-07 0.05780202E-11    2
 0.12281851E+05 0.06394841E+02 0.01726153E+02 0.11247386E-01 0.02447526E-04    3
-0.02026314E-06 0.14470000E-10 0.12586196E+05 0.14284450E+02                   4
GAME               62987GA  1C   1H   3     G  0300.00   1500.00  0600.00      1
 0.04809857E+02 0.06824206E-01 0.02258235E-05-0.02018341E-07 0.05736453E-11    2
 0.07558677E+05 0.02595904E+02 0.03054536E+02 0.12186402E-01 0.02332213E-04    3
-0.02121866E-06 0.15442261E-10 0.07885868E+05 0.11128781E+02                   4
GAME2              62987GA  1C   2H   6     G  0300.00   1500.00  0600.00      1
 0.07068372E+02 0.14216021E-01 0.05120694E-05-0.04421986E-07 0.13096413E-11    2
 0.05453790E+05-0.04173960E+02 0.02257655E+02 0.02916445E+00 0.05669861E-04    3
-0.05709755E-06 0.04268905E-09 0.06341297E+05 0.01915435E+03                   4
GAME3              62987GA  1C   3H   9     G  0300.00   1500.00  0600.00      1
 0.08410636E+02 0.02262803E+00 0.10430190E-05-0.07049610E-07 0.02015307E-10    2
-0.09087271E+05-0.10722496E+02 0.02120238E+02 0.04161029E+00 0.09959505E-04    3
-0.07846792E-06 0.05693396E-09-0.07911968E+05 0.01988516E+03                   4
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H                 120186H   1               G  0300.00   5000.00  1000.00      1
 0.02500000E+02 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.02547162E+06-0.04601176E+01 0.02500000E+02 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.02547162E+06-0.04601176E+01                   4
H+                120186H   1E  -1          G  0300.00   5000.00  1000.00      1
 0.02500000E+02 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.01840334E+07-0.11538620E+01 0.02500000E+02 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.01840334E+07-0.11538621E+01                   4
H-                120186H   1E   1          G  0300.00   5000.00  1000.00      1
 0.02500000E+02 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.15961045E+05-0.11524488E+01 0.02500000E+02 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.15961045E+05-0.11524486E+01                   4
H2                121286H   2               G  0300.00   5000.00  1000.00      1
 0.02991423E+02 0.07000644E-02-0.05633828E-06-0.09231578E-10 0.15827519E-14    2
-0.08350340E+04-0.13551101E+01 0.03298124E+02 0.08249441E-02-0.08143015E-05    3
-0.09475434E-09 0.04134872E-11-0.10125209E+04-0.03294094E+02                   4
H2ALME             62987AL  1C   1H   5     G  0300.00   1500.00  0600.00      1
 0.04898410E+02 0.13582233E-01 0.02611458E-05-0.04575170E-07 0.13848023E-11    2
 0.08743072E+04-0.11131169E+01-0.06283259E+01 0.03089530E+00 0.05774090E-04    3
-0.06488033E-06 0.04907111E-09 0.01889333E+05 0.02565779E+03                   4
H2ASME             62987AS  1C   1H   5     G  0300.00   1500.00  0600.00      1
 0.05686213E+02 0.02154421E+00 0.08185247E-05-0.07069951E-07 0.02101522E-10    2
 0.09331084E+05-0.06513957E+02-0.02113506E+02 0.04564229E+00 0.09983227E-04    3
-0.09399697E-06 0.07014021E-09 0.10771701E+05 0.03132610E+03                   4
H2C40             120189H   2C   40   1     G  0300.00   4000.00  1000.00      1
 0.10268878E+02 0.04896164E-01-0.04885080E-05-0.02708566E-08 0.05107013E-12    2
 0.02346902E+06-0.02815985E+03 0.04810971E+02 0.13139988E-01 0.09865073E-05    3
-0.06120720E-07 0.16400028E-11 0.02545803E+06 0.02113424E+02                   4
H2CCCCH            82489C   4H   3           G  0300.00   4000.00  1000.00      1
 0.11314095E+02 0.05014414E-01-0.05350444E-05-0.02825309E-08 0.05403279E-12    2
 0.05181211E+06-0.03062434E+03 0.06545799E+02 0.12424768E-01 0.05603226E-05    3
-0.05631141E-07 0.16652183E-11 0.05352502E+06-0.04264082E+02                   4
H2CCCCH2           82489C   4H   4           G  0300.00   4000.00  1000.00      1
 0.10620828E+02 0.07199370E-01-0.06806234E-05-0.04021185E-08 0.07378498E-12    2
 0.03358797E+06-0.03193583E+03 0.03849007E+02 0.01713169E+00 0.16442703E-05    3
-0.07761590E-07 0.01947859E-10 0.03608372E+06 0.05732120E+02                   4
H2CCCH             82489C   3H   3           G  0300.00   4000.00  1000.00      1
 0.08831047E+02 0.04357194E-01-0.04109066E-05-0.02368723E-08 0.04376520E-12    2
 0.03847419E+06-0.02177919E+03 0.04754199E+02 0.11080277E-01 0.02793323E-05    3
-0.05479212E-07 0.01949629E-10 0.03988883E+06 0.05854549E+01                   4
H2CN               41687H   2C   1N   1     G  0300.00   4000.00  1000.00      1
 0.05209703E+02 0.02969291E-01-0.02855589E-05-0.16355504E-09 0.03043259E-12    2
 0.02767711E+06-0.04444478E+02 0.02851661E+02 0.05695233E-01 0.10711403E-05    3
-0.16226120E-08-0.02351108E-11 0.02863782E+06 0.08992751E+02                   4
H2CNH              41687C   1H   3N   1     G  0300.00   4000.00  1000.00      1
 0.05221589E+02 0.04748525E-01-0.04179158E-05-0.02606612E-08 0.04703140E-12    2
 0.08657219E+05-0.04500776E+02 0.02365878E+02 0.06780570E-01 0.02422999E-04    3
-0.06157824E-08-0.16150971E-11 0.09971141E+05 0.12307176E+02                   4
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H2CNNO2             41687H   2C   1N   2O   2G  0300.00   4000.00  1000.00      1
 0.11407942E+02 0.04564542E-01-0.04600304E-05-0.02513538E-08 0.04782211E-12    2
 0.12421422E+05-0.03165237E+03 0.03534316E+02 0.01811271E+00 0.02394017E-05    3
-0.10800240E-07 0.04222725E-10 0.15090057E+05 0.11311378E+02                   4
H2GAET              62987GA  1C   2H   7     G  0300.00   1500.00  0600.00      1
 0.07187273E+02 0.01867211E+00 0.06156157E-05-0.06027763E-07 0.01797524E-10    2
-0.04232757E+05-0.04686699E+02 0.04124020E+01 0.03972971E+00 0.07979140E-04    3
-0.08059233E-06 0.06040387E-09-0.02983932E+05 0.02816147E+03                   4
H2GAME              62987GA  1C   1H   5     G  0300.00   1500.00  0600.00      1
 0.05831604E+02 0.12228715E-01 0.03033669E-05-0.03956941E-07 0.12254516E-11    2
 0.05189255E+05-0.04446614E+02 0.05251130E+01 0.02904695E+00 0.04844148E-04    3
-0.06097646E-06 0.04672763E-09 0.06158712E+05 0.02122148E+03                   4
H2NF                42489H   2N   1F   1     G  0300.00   3000.00  1000.00      1
 0.04143658E+02 0.03805135E-01-0.02771153E-05-0.03589717E-08 0.07589549E-12    2
-0.04891486E+05 0.02309362E+02 0.02597862E+02 0.05882104E-01 0.04938351E-05    3
-0.01948600E-07 0.03634002E-11-0.04301253E+05 0.10982895E+02                   4
H2O                 20387H   2O   1           G  0300.00   5000.00  1000.00      1
 0.02672145E+02 0.03056293E-01-0.08730260E-05 0.12009964E-09-0.06391618E-13    2
-0.02989921E+06 0.06862817E+02 0.03386842E+02 0.03474982E-01-0.06354696E-04    3
 0.06968581E-07-0.02506588E-10-0.03020811E+06 0.02590232E+02                   4
H2O(L)              120186H   2O   1           L  0273.15   1000.00  1000.00      1
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00 0.12712782E+02-0.01766279E+00-0.02255666E-03    3
 0.02082090E-05-0.02407861E-08-0.03748320E+06-0.05911534E+03                   4
H2O(S)              120186H   2O   1           S  0200.00   0273.15  1000.00      1
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00-0.03926933E+00 0.01692042E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-0.03594958E+06 0.05693378E+01                   4
H2O2                120186H   2O   2           G  0300.00   5000.00  1000.00      1
 0.04573167E+02 0.04336136E-01-0.14746888E-05 0.02348903E-08-0.14316536E-13    2
-0.01800696E+06 0.05011369E+01 0.03388753E+02 0.06569226E-01-0.14850125E-06    3
-0.04625805E-07 0.02471514E-10-0.01766314E+06 0.06785363E+02                   4
H2S                 121286H   2S   1           G  0300.00   5000.00  1000.00      1
 0.02883147E+02 0.03827835E-01-0.14233978E-05 0.02497998E-08-0.16602733E-13    2
-0.03480742E+05 0.07258161E+02 0.03071029E+02 0.05578261E-01-0.10309669E-04    3
 0.12019529E-07-0.04838369E-10-0.03559826E+05 0.05935226E+02                   4
H2SI(NH2)2          22790SI  1H   6N   2     G  0300.00   4000.00  1000.00      1
 0.13021791E+02 0.06465444E-01-0.05816746E-05-0.03484493E-08 0.06340675E-12    2
-0.02357070E+06-0.04132569E+03 0.05615307E+02 0.02079854E+00-0.09999531E-05    3
-0.12885246E-07 0.06091865E-10-0.02126283E+06-0.16156578E+01                   4
H2SIN               22790H   2SI  1N   1     G  0300.00   4000.00  1000.00      1
 0.06826533E+02 0.02125460E-01-0.02343131E-05-0.11663394E-09 0.02277273E-12    2
 0.07253672E+06-0.10521624E+02 0.03549344E+02 0.07311004E-01 0.03249025E-05    3
-0.03682945E-07 0.11215113E-11 0.07370656E+06 0.07565328E+02                   4
H2SINH              42489SI  1N   1H   3     G  0300.00   3000.00  1000.00      1
 0.06588295E+02 0.04903194E-01-0.04944719E-05-0.05014630E-08 0.11394698E-12    2
 0.01809794E+06-0.09522970E+02 0.02822195E+02 0.12455182E-01-0.08350819E-05    3
-0.07411813E-07 0.03579019E-10 0.01923616E+06 0.10547831E+02                   4
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H2SINH2             42489SI  1N   1H   4     G  0300.00   3000.00  1000.00      1
 0.07392047E+02 0.05476841E-01-0.04453276E-05-0.05236661E-08 0.11383899E-12     2
 0.11368581E+05-0.11380495E+02 0.04053222E+02 0.11822311E-01-0.04348128E-05     3
-0.06225818E-07 0.02798829E-10 0.12419705E+05 0.06562032E+02                   4
H2SINH3           121386SI  1H   5N   1     G  0300.00   4000.00  1000.00      1
 0.08711392E+02 0.05909106E-01-0.05436615E-05-0.03248350E-08 0.05960257E-12     2
 0.08441694E+05-0.01933470E+03 0.04269729E+02 0.11252245E-01 0.01951721E-04     3
-0.03578372E-07-0.08372202E-12 0.10222041E+05 0.05876735E+02                   4
H2SISIH2            42489SI  2H   4           G  0300.00   3000.00  1000.00      1
 0.08986817E+02 0.05405047E-01-0.05214021E-05-0.05313742E-08 0.11887266E-12     2
 0.02832747E+06-0.02004478E+03 0.05133186E+02 0.12528548E-01-0.04620421E-05     3
-0.06606075E-07 0.02864344E-10 0.02956915E+06 0.07605133E+01                   4
H3ASGAET3           62987AS  1GA  1C   6H  18G  0300.00   1500.00  0600.00      1
 0.08508501E+02 0.05632369E+00 0.02524140E-04-0.01861451E-06 0.05372402E-10     2
-0.10855169E+05-0.03399857E+02-0.08974745E+02 0.10905161E+00 0.02811457E-03     3
-0.02195513E-05 0.15997339E-09-0.07592761E+05 0.08165459E+03                   4
H3ASGAME3           62987AS  1GA  1C   3H  12G  0300.00   1500.00  0600.00      1
 0.11254990E+02 0.03159752E+00 0.11779036E-05-0.10133524E-07 0.02947355E-10     2
-0.07280344E+05-0.02238729E+03 0.12671606E+01 0.06214586E+00 0.13856307E-04     3
-0.12200444E-06 0.08982019E-09-0.05425619E+05 0.02613306E+03                   4
H3SIN               22790H   3SI  1N   1     G  0300.00   4000.00  1000.00      1
 0.07964213E+02 0.03355633E-01-0.03579695E-05-0.01889818E-08 0.03650912E-12     2
 0.11486972E+06-0.01924110E+03 0.02790628E+02 0.11345662E-01 0.08321879E-05     3
-0.05845045E-07 0.01685969E-10 0.11673571E+06 0.09384630E+02                   4
H3SINH              42489SI  1N   1H   4     G  0300.00   3000.00  1000.00      1
 0.07697340E+02 0.05657943E-01-0.05209306E-05-0.05617966E-08 0.12635020E-12     2
 0.02282005E+06-0.13303793E+02 0.02778390E+02 0.15107111E-01-0.06734260E-05     3
-0.08928515E-07 0.04115347E-10 0.02435913E+06 0.13093859E+02                   4
H3SISIH             90589SI  2H   4           G  0300.00   2000.00  1000.00      1
 0.07778291E+02 0.07255418E-01-0.08123265E-05-0.11682818E-08 0.03425139E-11     2
 0.03742600E+06-0.13484629E+02 0.02774192E+02 0.02555302E+00-0.02883836E-03     3
 0.02000737E-06-0.06100616E-10 0.03861801E+06 0.11350098E+02                   4
H3SISIH3            42489SI  2H   6           G  0300.00   3000.00  1000.00      1
 0.10682729E+02 0.08221416E-01-0.08096035E-05-0.08337975E-08 0.01908205E-11     2
 0.05316920E+05-0.03082188E+03 0.03898289E+02 0.01977415E+00 0.01791014E-05     3
-0.10331682E-07 0.03931698E-10 0.07621719E+05 0.06227022E+02                   4
HALME               62987AL  1C   1H   4     G  0300.00   1500.00  0600.00      1
 0.04812273E+02 0.10296448E-01 0.02582807E-05-0.03323596E-07 0.09884584E-11     2
 0.11766730E+05 0.09557062E+01 0.11187894E+01 0.02180038E+00 0.04120785E-04     3
-0.04366690E-06 0.03273825E-09 0.12447363E+05 0.01886107E+03                   4
HALME2              62987AL  1C   2H   7     G  0300.00   1500.00  0600.00      1
 0.05705171E+02 0.01924317E+00 0.06377855E-05-0.06346800E-07 0.01896799E-10     2
-0.06049864E+05-0.06331378E+01-0.14942614E+01 0.04158567E+00 0.08686772E-04     3
-0.08604142E-06 0.06447652E-09-0.04722516E+05 0.03427724E+03                   4
HASALME             62987AS  1AL  1C   1H   4G  0300.00   1500.00  0600.00      1
 0.06956538E+02 0.10612781E-01 0.02440153E-05-0.03297737E-07 0.10200039E-11     2
 0.02582505E+06-0.08625792E+01 0.02544858E+02 0.02465794E+00 0.03677807E-04     3
-0.05008893E-06 0.03848383E-09 0.02663010E+06 0.02046858E+03                   4
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HASGAET            62987AS  1GA  1C   2H   6G  0300.00   1500.00  0600.00      1
 0.06336445E+02 0.02340603E+00 0.09066638E-05-0.07519059E-07 0.01828115E-10    2
 0.03184605E+06 0.05812180E+02 0.05642723E+02 0.02296738E+00 0.10948674E-04    3
-0.02449038E-06 0.09602700E-10 0.03204717E+06 0.09675533E+02                   4
HASGAME            62987AS  1GA  1C   1H   4G  0300.00   1500.00  0600.00      1
 0.07507970E+02 0.09277900E-01 0.01891931E-05-0.02769886E-07 0.07996069E-11    2
 0.03253907E+06-0.14226081E+01 0.04859126E+02 0.01750423E+00 0.02831995E-04    3
-0.03107936E-06 0.02299468E-09 0.03302941E+06 0.11429521E+02                   4
HASME              62987AS  1C   1H   4    G  0300.00   1500.00  0600.00      1
 0.05753261E+02 0.01841813E+00 0.07493312E-05-0.05919916E-07 0.01726246E-10    2
 0.01880057E+06-0.05360325E+02-0.15750948E+00 0.03649094E+00 0.08332939E-04    3
-0.07234666E-06 0.05330928E-09 0.01989791E+06 0.02335316E+03                   4
HASME2             62987AS  1C   2H   7    G  0300.00   1500.00  0600.00      1
 0.05850436E+02 0.01841765E+00 0.08066844E-05-0.05868715E-07 0.01726428E-10    2
 0.06450535E+05 0.03909152E+01-0.02908405E+01 0.03729576E+00 0.08335854E-04    3
-0.07455611E-06 0.05527881E-09 0.07587765E+05 0.03020451E+03                   4
HCCHCCH            82489C   4H   3          G  0300.00   4000.00  1000.00      1
 0.10752738E+02 0.05381153E-01-0.05549637E-05-0.03052266E-08 0.05761740E-12    2
 0.06121419E+06-0.02973025E+03 0.04153881E+02 0.01726287E+00-0.02389374E-05    3
-0.10187000E-07 0.04340504E-10 0.06338070E+06 0.06036506E+02                   4
HCCO               32387H   1C   20   1    G  0300.00   4000.00  1000.00      1
 0.06758073E+02 0.02000400E-01-0.02027607E-05-0.10411318E-09 0.01965164E-12    2
 0.01901513E+06-0.09071262E+02 0.05047965E+02 0.04453478E-01 0.02268282E-05    3
-0.14820945E-08 0.02250741E-11 0.01965891E+06 0.04818439E+01                   4
HCCOH              32387H   2C   20   1    G  0300.00   4000.00  1000.00      1
 0.07328324E+02 0.03336416E-01-0.03024705E-05-0.01781106E-08 0.03245168E-12    2
 0.07598258E+05-0.14012140E+02 0.03899465E+02 0.09701075E-01-0.03119309E-05    3
-0.05537732E-07 0.02465732E-10 0.08701190E+05 0.04491874E+02                   4
HCL                42189CL  1H   1          G  0300.00   5000.00  1000.00      1
 0.02755335E+02 0.14735811E-02-0.04971254E-05 0.08108658E-09-0.05072063E-13    2
-0.11918058E+05 0.06515116E+02 0.03338534E+02 0.12682066E-02-0.03666916E-04    3
 0.04703992E-07-0.01836011E-10-0.12131511E+05 0.03193555E+02                   4
HCN               121286H   1C   1N   1    G  0300.00   5000.00  1000.00      1
 0.03650077E+02 0.03460998E-01-0.12742788E-05 0.02217655E-08-0.14771774E-13    2
 0.14983916E+05 0.02393220E+02 0.02490462E+02 0.08611280E-01-0.10310342E-04    3
 0.07481498E-07-0.02229109E-10 0.15208344E+05 0.07904981E+02                   4
HCNH               41687C   1H   2N   1    G  0300.00   4000.00  1000.00      1
 0.04923292E+02 0.03332897E-01-0.03370896E-05-0.01901619E-08 0.03531825E-12    2
 0.03132669E+06-0.16325088E+01 0.02759456E+02 0.06103386E-01 0.07713149E-05    3
-0.02063093E-07 0.01931919E-11 0.03217247E+06 0.10574895E+02                   4
HCNO              120186H   1C   1N   10   1G  0250.00   4000.00  1000.00      1
 0.06692412E+02 0.02368360E-01-0.02371510E-05-0.12755033E-09 0.02407137E-12    2
 0.01694736E+06-0.12454345E+02 0.03184858E+02 0.09752316E-01-0.12802028E-05    3
-0.06163104E-07 0.03226275E-10 0.01797907E+06 0.06123843E+02                   4
HCO               121286H   1C   10   1    G  0300.00   5000.00  1000.00      1
 0.03557271E+02 0.03345572E-01-0.13350060E-05 0.02470572E-08-0.01713850E-12    2
 0.03916324E+05 0.05552299E+02 0.02898329E+02 0.06199146E-01-0.09623084E-04    3
 0.10898249E-07-0.04574885E-10 0.04159922E+05 0.08983614E+02                   4
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HCO+              121286H   1C   1O   1E  -1G  0300.00   5000.00  1000.00      1
 0.03692074E+02 0.03454732E-01-0.13165244E-05 0.02323551E-08-0.15541321E-13    2
 0.09890941E+06 0.02330722E+02 0.02496483E+02 0.08690658E-01-0.10604453E-04    3
 0.07882791E-07-0.02418385E-10 0.09915097E+06 0.08048177E+02                   4
HE                120186HE  1               G  0300.00   5000.00  1000.00      1
 0.02500000E+02 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
-0.07453750E+04 0.09153489E+01 0.02500000E+02 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00-0.07453750E+04 0.09153488E+01                   4
HE+               120186HE  1E  -1           G  0300.00   5000.00  1000.00      1
 0.02500000E+02 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.02853426E+07 0.16084045E+01 0.02500000E+02 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.02853426E+07 0.16084046E+01                   4
HF                121286H   1F   1           G  0300.00   5000.00  1000.00      1
 0.02956767E+02 0.07721015E-02-0.09899834E-06-0.04993520E-10 0.14293306E-14    2
-0.03361061E+06 0.04011673E+02 0.03431841E+02 0.04404165E-02-0.08828452E-05    3
 0.06574516E-08-0.02055909E-12-0.03381977E+06 0.12382699E+01                   4
HGAET              62987GA  1C   2H   6      G  0300.00   1500.00  0600.00      1
 0.06580151E+02 0.16101323E-01 0.05009545E-05-0.05185148E-07 0.15240853E-11    2
 0.08765131E+05-0.04046067E+01 0.11632838E+01 0.03282212E+00 0.06765717E-04    3
-0.06509541E-06 0.04835806E-09 0.09767174E+05 0.02588269E+03                   4
HGAET2             62987GA  1C   4H  11      G  0300.00   1500.00  0600.00      1
 0.06511306E+02 0.02819753E+00 0.14187506E-05-0.09000947E-07 0.02572894E-10    2
-0.04482180E+05 0.04709021E+02-0.14865759E+01 0.05217640E+00 0.13563420E-04    3
-0.10119820E-06 0.07319853E-09-0.02985242E+05 0.04364749E+03                   4
HGAME              62987GA  1C   1H   4      G  0300.00   1500.00  0600.00      1
 0.05318279E+02 0.09490931E-01 0.02277164E-05-0.03005070E-07 0.09037830E-11    2
 0.12535338E+05-0.10657105E+00 0.01784749E+02 0.02058861E+00 0.03548509E-04    3
-0.04111927E-06 0.03108978E-09 0.13184225E+05 0.01700701E+03                   4
HGAME2             62987GA  1C   2H   7      G  0300.00   1500.00  0600.00      1
 0.06759397E+02 0.14261030E-01-0.11740239E-06-0.05001401E-07 0.15027851E-11    2
-0.14732646E+04-0.02967135E+02 0.09039155E+01 0.03264779E+00 0.05389243E-04    3
-0.06814504E-06 0.05150323E-09-0.03978242E+04 0.02539304E+03                   4
HMEGAET            62987GA  1C   3H   9      G  0300.00   1500.00  0600.00      1
 0.07025463E+02 0.02564787E+00 0.09619100E-05-0.08403699E-07 0.02488960E-10    2
-0.13613768E+04-0.03319484E+02-0.02079142E+02 0.05373076E+00 0.11810364E-04    3
-0.10998548E-06 0.08189554E-09 0.03216961E+04 0.04086070E+03                   4
HN3               82687H   1N   3           G  0300.00   4000.00  1000.00      1
 0.06023015E+02 0.02454362E-01-0.02404279E-05-0.13229726E-09 0.02474146E-12    2
 0.03394051E+06-0.07015537E+02 0.03621003E+02 0.06030785E-01 0.04054460E-05    3
-0.02545270E-07 0.06174280E-11 0.03482373E+06 0.06333769E+02                   4
HNCO              31287H   1N   1C   1O   1G  0300.00   4000.00  1000.00      1
 0.06211867E+02 0.02297137E-01-0.02216128E-05-0.12220438E-09 0.02272406E-12    2
-0.14770725E+05-0.08016633E+02 0.03694059E+02 0.06657236E-01-0.05054468E-06    3
-0.03473411E-07 0.13605694E-11-0.13919758E+05 0.05712742E+02                   4
HNF               42489H   1N   1F   1      G  0300.00   3000.00  1000.00      1
 0.04133219E+02 0.01912056E-01-0.16253301E-06-0.01726461E-08 0.03743691E-12    2
 0.14670521E+05 0.03292122E+02 0.03249760E+02 0.03261817E-01 0.04355642E-06    3
-0.11002765E-08 0.02926757E-11 0.14991264E+05 0.08187434E+02                   4
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HNF2              42489H   1N   1F   2     G  0300.00   3000.00  1000.00      1
 0.05704866E+02 0.03049897E-01-0.02826802E-05-0.02923184E-08 0.06551055E-12    2
-0.09107488E+05-0.03941331E+02 0.02572812E+02 0.08762144E-01-0.02326921E-05    3
-0.05000826E-07 0.02143837E-10-0.08086760E+05 0.13006810E+02                   4
HNO               121286H   1N   1O   1     G  0300.00   5000.00  1000.00      1
 0.03615144E+02 0.03212485E-01-0.12603370E-05 0.02267297E-08-0.15362358E-13    2
 0.10661911E+05 0.04810263E+02 0.02784402E+02 0.06609646E-01-0.09300223E-04    3
 0.09437980E-07-0.03753146E-10 0.10918779E+05 0.09035629E+02                   4
HNO3              121286H   1N   1O   3     G  0300.00   5000.00  1000.00      1
 0.07003844E+02 0.05811493E-01-0.02333788E-04 0.04288814E-08-0.02959385E-12    2
-0.01889952E+06-0.10478628E+02 0.13531850E+01 0.02220024E+00-0.01978811E-03    3
 0.08773908E-07-0.16583844E-11-0.01738562E+06 0.01851868E+03                   4
HO2               20387H   1O   2           G  0300.00   5000.00  1000.00      1
 0.04072191E+02 0.02131296E-01-0.05308145E-05 0.06112269E-09-0.02841164E-13    2
-0.15797270E+03 0.03476029E+02 0.02979963E+02 0.04996697E-01-0.03790997E-04    3
 0.02354192E-07-0.08089024E-11 0.01762273E+04 0.09222724E+02                   4
HOCN              120186H   1O   1C   1N   1G  0250.00   4000.00  1000.00      1
 0.05645607E+02 0.02298206E-01-0.02162629E-05-0.12148014E-09 0.02238636E-12    2
-0.03178109E+05-0.03590263E+02 0.03628292E+02 0.05664184E-01-0.11702056E-06    3
-0.02348638E-07 0.08016402E-11-0.02475925E+05 0.07476825E+02                   4
HONO              31787H   1N   1O   2     G  0300.00   5000.00  1000.00      1
 0.05486892E+02 0.04218064E-01-0.16491426E-05 0.02971876E-08-0.02021148E-12    2
-0.11268646E+05-0.02997002E+02 0.02290413E+02 0.14099223E-01-0.13678717E-04    3
 0.07498780E-07-0.01876905E-10-0.10431945E+05 0.13280769E+02                   4
HSI(NH2)2         22790SI  1H   5N   2     G  0300.00   4000.00  1000.00      1
 0.11716773E+02 0.05339021E-01-0.04667823E-05-0.02824087E-08 0.05080915E-12    2
-0.12641686E+04-0.03245117E+03 0.06289698E+02 0.16750596E-01-0.15208775E-05    3
-0.10700650E-07 0.05538640E-10 0.03154770E+04-0.03746008E+02                   4
HSI(NH2)3         22790SI  1H   7N   3     G  0300.00   4000.00  1000.00      1
 0.16614058E+02 0.07395874E-01-0.06440009E-05-0.03918887E-08 0.07045959E-12    2
-0.03859547E+06-0.05865317E+03 0.07070983E+02 0.02754435E+00-0.02603669E-04    3
-0.01874567E-06 0.09778511E-10-0.03582658E+06-0.08209675E+02                   4
HSICL             121986SI  1H   1CL  1     G  0300.00   2000.00  1000.00      1
 0.04900627E+02 0.01981752E-01-0.03634646E-05-0.02285211E-08 0.07633527E-12    2
 0.06914634E+05 0.13770041E+01 0.03072747E+02 0.09057843E-01-0.11591338E-04    3
 0.08310476E-07-0.02482999E-10 0.07324210E+05 0.10334904E+02                   4
HSIN              22790H   1SI  1N   1     G  0300.00   4000.00  1000.00      1
 0.05746590E+02 0.11671186E-02-0.13607424E-06-0.05908616E-09 0.11746961E-13    2
 0.04484671E+06-0.05931788E+02 0.04865176E+02 0.01775119E-01 0.04890869E-05    3
 0.03922382E-08-0.07913276E-11 0.04526352E+06-0.07134509E+01                   4
HSINH             42489SI  1H   2N   1     G  0300.00   3000.00  1000.00      1
 0.06493435E+02 0.02567980E-01-0.03126526E-05-0.02577467E-08 0.06216479E-12    2
 0.04035934E+06-0.07830112E+02 0.03566343E+02 0.08446736E-01-0.07699952E-05    3
-0.05270970E-07 0.02581065E-10 0.04124903E+06 0.07780791E+02                   4
HSINH2            42489SI  1N   1H   3     G  0300.00   3000.00  1000.00      1
 0.06177894E+02 0.04689964E-01-0.03583293E-05-0.04457980E-08 0.09379187E-12    2
 0.10912773E+05-0.07006672E+02 0.02716144E+02 0.12042781E-01-0.09827195E-05    3
-0.07408477E-07 0.03789792E-10 0.11907715E+05 0.11262523E+02                   4
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I*C3H7            120186C   3H   7          G  0300.00   5000.00  1000.00      1
 0.08063369E+02 0.15744876E-01-0.05182391E-04 0.07477245E-08-0.03854422E-12     2
 0.05313871E+05-0.02192646E+03 0.01713299E+02 0.02542616E+00 0.15808083E-05     3
-0.01821286E-06 0.08827710E-10 0.07535808E+05 0.12979008E+02                   4
ME2GAET            62987GA  1C   4H  11     G  0300.00   1500.00  0600.00      1
 0.07174541E+02 0.03235532E+00 0.14951986E-05-0.10482260E-07 0.03053961E-10     2
-0.06383914E+05-0.02026765E+02-0.03218207E+02 0.06398884E+00 0.15545521E-04     3
-0.12847095E-06 0.09441259E-09-0.04451897E+05 0.04848091E+03                   4
MEGAET             62987GA  1C   3H   8     G  0300.00   1500.00  0600.00      1
 0.06600990E+02 0.02284791E+00 0.10133754E-05-0.07318045E-07 0.02140196E-10     2
 0.04071592E+05 0.05239051E+01-0.08169937E+01 0.04554296E+00 0.10531326E-04     3
-0.09079987E-06 0.06700563E-09 0.05448005E+05 0.03655501E+03                   4
MEGAET2            62987GA  1C   5H  13     G  0300.00   1500.00  0600.00      1
 0.08123155E+02 0.03978908E+00 0.01690979E-04-0.13084149E-07 0.03852598E-10     2
-0.08091056E+05-0.05039992E+02-0.05607498E+02 0.08187357E+00 0.01920530E-03     3
-0.01678978E-05 0.12433538E-09-0.05546687E+05 0.06163371E+03                   4
N                  120186N   1              G  0300.00   5000.00  1000.00      1
 0.02450268E+02 0.10661458E-03-0.07465337E-06 0.01879652E-09-0.10259839E-14     2
 0.05611604E+06 0.04448758E+02 0.02503071E+02-0.02180018E-03 0.05420529E-06     3
-0.05647560E-09 0.02099904E-12 0.05609890E+06 0.04167566E+02                   4
N*C3H7             120186C   3H   7          G  0300.00   5000.00  1000.00      1
 0.07978290E+02 0.15761134E-01-0.05173243E-04 0.07443892E-08-0.03824978E-12     2
 0.07579402E+05-0.01935611E+03 0.01922536E+02 0.02478927E+00 0.01810249E-04     3
-0.01783265E-06 0.08582996E-10 0.09713281E+05 0.13992715E+02                   4
N2                 121286N   2              G  0300.00   5000.00  1000.00      1
 0.02926640E+02 0.14879768E-02-0.05684760E-05 0.10097038E-09-0.06753351E-13     2
-0.09227977E+04 0.05980528E+02 0.03298677E+02 0.14082404E-02-0.03963222E-04     3
 0.05641515E-07-0.02444854E-10-0.10208999E+04 0.03950372E+02                   4
N2H2               121286N   2H   2          G  0300.00   5000.00  1000.00      1
 0.03371185E+02 0.06039968E-01-0.02303853E-04 0.04062789E-08-0.02713144E-12     2
 0.02418172E+06 0.04980585E+02 0.16179994E+01 0.13063122E-01-0.01715711E-03     3
 0.16056079E-07-0.06093638E-10 0.02467526E+06 0.13794670E+02                   4
N2H3               120186N   2H   3          G  0300.00   5000.00  1000.00      1
 0.04441846E+02 0.07214270E-01-0.02495684E-04 0.03920564E-08-0.02298949E-12     2
 0.16642211E+05-0.04275204E+01 0.03174203E+02 0.04715907E-01 0.13348671E-04     3
-0.01919684E-06 0.07487563E-10 0.01727269E+06 0.07557224E+02                   4
N2H4               121286N   2H   4          G  0300.00   5000.00  1000.00      1
 0.04977317E+02 0.09595519E-01-0.03547639E-04 0.06124299E-08-0.04029795E-12     2
 0.09341219E+05-0.02962989E+02 0.06442605E+00 0.02749729E+00-0.02899451E-03     3
 0.01745239E-06-0.04422282E-10 0.10451917E+05 0.02127789E+03                   4
N2H4(L)            90589H   4N   2          L  0300.00   0600.00  0450.00      1
 0.08890683E+02 0.08330343E-01 0.04945549E-04-0.04909251E-08-0.03355824E-10     2
 0.03032250E+05-0.03871433E+03 0.09047444E+02 0.09241592E-01 0.02263547E-04     3
-0.08952247E-07 0.14868629E-10 0.02970392E+05-0.03974033E+03                   4
N2O                121286N   2O   1          G  0300.00   5000.00  1000.00      1
 0.04718977E+02 0.02873713E-01-0.11974958E-05 0.02250551E-08-0.15753370E-13     2
 0.08165811E+05-0.16572504E+01 0.02543057E+02 0.09492193E-01-0.09792775E-04     3
 0.06263844E-07-0.01901825E-10 0.08765100E+05 0.09511222E+02                   4
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N2O+                121286N   2O   1E  -1     G  0300.00   5000.00  1000.00      1
 0.05398516E+02 0.02249478E-01-0.09577056E-05 0.01823192E-08-0.12844222E-13     2
 0.15848513E+06-0.03733146E+02 0.03187228E+02 0.08350714E-01-0.07894548E-04     3
 0.04597444E-07-0.13810748E-11 0.15912794E+06 0.07779425E+02                    4
N2O4                121286N   2O   4          G  0300.00   5000.00  1000.00      1
 0.10482201E+02 0.05972272E-01-0.02564043E-04 0.04916885E-08-0.03490969E-12     2
-0.02849988E+05-0.02612289E+03 0.03624592E+02 0.02474708E+00-0.02172874E-03     3
 0.09927103E-07-0.02222817E-10-0.09128241E+04 0.09457174E+02                    4
N3                  121286N   3            G  0300.00   5000.00  1000.00      1
 0.05208505E+02 0.02444507E-01-0.10389415E-05 0.01977416E-08-0.13956436E-13     2
 0.04796178E+06-0.03612755E+02 0.02882218E+02 0.08930338E-01-0.08539038E-04     3
 0.05045585E-07-0.15212480E-11 0.04863468E+06 0.08481757E+02                    4
NCO                 121286N   1C   10   1     G  0300.00   5000.00  1000.00      1
 0.05012045E+02 0.02626773E-01-0.11082433E-05 0.02093860E-08-0.14603470E-13     2
 0.01737185E+06-0.01830075E+02 0.02830320E+02 0.08871490E-01-0.08945636E-04     3
 0.05876918E-07-0.01907734E-10 0.01800543E+06 0.09498831E+02                    4
NF                  121286N   1F   1          G  0300.00   5000.00  1000.00      1
 0.03862176E+02 0.07551806E-02-0.03044942E-05 0.05874447E-09-0.04187479E-13     2
 0.02867242E+06 0.03457232E+02 0.02871947E+02 0.03312192E-01-0.02691158E-04     3
 0.11219514E-08-0.02475130E-11 0.02896257E+06 0.08640247E+02                    4
NFO                 121286N   1F   10   1     G  0300.00   5000.00  1000.00      1
 0.05174520E+02 0.01938472E-01-0.08222701E-05 0.15642909E-09-0.11044974E-13     2
-0.09670935E+05-0.05352460E+01 0.03352307E+02 0.07229966E-01-0.06951136E-04     3
 0.03828526E-07-0.10235582E-11-0.09167035E+05 0.08854189E+02                    4
NFO2                121286N   1F   10   2     G  0300.00   5000.00  1000.00      1
 0.06816857E+02 0.03462639E-01-0.14922156E-05 0.02869665E-08-0.02041856E-12     2
-0.15602619E+05-0.09320129E+02 0.02447528E+02 0.15441095E-01-0.13005952E-04     3
 0.04856383E-07-0.06852266E-11-0.14393999E+05 0.13283604E+02                    4
NH                   31387H   1N   1          G  0300.00   5000.00  1000.00      1
 0.02760249E+02 0.13753463E-02-0.04451914E-05 0.07692791E-09-0.05017592E-13     2
 0.04207828E+06 0.05857199E+02 0.03339758E+02 0.12530086E-02-0.03491645E-04     3
 0.04218812E-07-0.15576179E-11 0.04185047E+06 0.02507180E+02                    4
NH2                 121686N   1H   2          G  0300.00   5000.00  1000.00      1
 0.02961311E+02 0.02932699E-01-0.09063600E-05 0.16172575E-09-0.12042003E-13     2
 0.02191976E+06 0.05777878E+02 0.03432493E+02 0.03299540E-01-0.06613600E-04     3
 0.08590947E-07-0.03572046E-10 0.02177227E+06 0.03090110E+02                    4
NH3                 121386N   1H   3          G  0300.00   5000.00  1000.00      1
 0.02461904E+02 0.06059166E-01-0.02004976E-04 0.03136003E-08-0.01938317E-12     2
-0.06493269E+05 0.07472097E+02 0.02204351E+02 0.10114765E-01-0.14652648E-04     3
 0.14472350E-07-0.05328509E-10-0.06525488E+05 0.08127138E+02                    4
NNH                 120186N   2H   1          G  0250.00   4000.00  1000.00      1
 0.04415342E+02 0.16143879E-02-0.16328943E-06-0.08559846E-09 0.16147909E-13     2
 0.02788029E+06 0.09042888E+01 0.03501344E+02 0.02053586E-01 0.07170409E-05     3
 0.04921348E-08-0.09671170E-11 0.02833347E+06 0.06391837E+02                    4
NO                  121286N   10   1          G  0300.00   5000.00  1000.00      1
 0.03245435E+02 0.12691383E-02-0.05015890E-05 0.09169283E-09-0.06275419E-13     2
 0.09800840E+05 0.06417293E+02 0.03376541E+02 0.12530634E-02-0.03302750E-04     3
 0.05217810E-07-0.02446262E-10 0.09817961E+05 0.05829590E+02                    4
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NO+               121286N   10    1E  -1     G  0300.00   5000.00  1000.00      1
 0.02914888E+02 0.14993349E-02-0.05727972E-05 0.10177767E-09-0.06825390E-13    2
 0.11818688E+06 0.06844346E+02 0.03297349E+02 0.14228899E-02-0.04007441E-04    3
 0.05670551E-07-0.02446971E-10 0.11808338E+06 0.04749948E+02                   4
NO2               121286N   10    2           G  0300.00   5000.00  1000.00      1
 0.04682859E+02 0.02462429E-01-0.10422585E-05 0.01976902E-08-0.13917168E-13    2
 0.02261292E+05 0.09885985E+01 0.02670600E+02 0.07838500E-01-0.08063864E-04    3
 0.06161714E-07-0.02320150E-10 0.02896290E+05 0.11612071E+02                   4
NO2-              121286N   10    2E   1     G  0300.00   5000.00  1000.00      1
 0.05043114E+02 0.02166427E-01-0.09455454E-05 0.01816313E-08-0.12383945E-13    2
-0.02621553E+06-0.14459051E+01 0.02448586E+02 0.08982507E-01-0.07853431E-04    3
 0.03927276E-07-0.10716939E-11-0.02545097E+06 0.12130600E+02                   4
NO3               121286N   10    3           G  0300.00   5000.00  1000.00      1
 0.07120307E+02 0.03246228E-01-0.14316134E-05 0.02797053E-08-0.02013007E-12    2
 0.05864479E+05-0.12137301E+02 0.12210763E+01 0.01878797E+00-0.13443212E-04    3
 0.12746013E-08 0.13540601E-11 0.07473144E+05 0.01840202E+03                   4
O                 1201860   1             G  0300.00   5000.00  1000.00      1
 0.02542059E+02-0.02755061E-03-0.03102803E-07 0.04551067E-10-0.04368051E-14    2
 0.02923080E+06 0.04920308E+02 0.02946428E+02-0.16381665E-02 0.02421031E-04    3
-0.16028431E-08 0.03890696E-11 0.02914764E+06 0.02963995E+02                   4
O+                1212860   1E  -1          G  0300.00   5000.00  1000.00      1
 0.02501869E+02-0.06107262E-04 0.07324307E-07-0.03438353E-10 0.05506407E-14    2
 0.01879552E+07 0.04372826E+02 0.02499272E+02 0.05820598E-04-0.11209219E-07    3
 0.08232108E-10-0.01916378E-13 0.01879556E+07 0.04384825E+02                   4
O-                 905890   1E   1          G  0300.00   5000.00  1000.00      1
 0.02559580E+02-0.07147887E-03 0.03301804E-06-0.06660944E-10 0.04900726E-14    2
 0.11489346E+05 0.04426186E+02 0.02747263E+02-0.05724860E-02 0.02712548E-05    3
 0.02691511E-08-0.02002357E-11 0.11443947E+05 0.03469852E+02                   4
O2                1213860   2             G  0300.00   5000.00  1000.00      1
 0.03697578E+02 0.06135197E-02-0.12588420E-06 0.01775281E-09-0.11364354E-14    2
-0.12339301E+04 0.03189165E+02 0.03212936E+02 0.11274864E-02-0.05756150E-05    3
 0.13138773E-08-0.08768554E-11-0.10052490E+04 0.06034737E+02                   4
O2-               1212860   2E   1          G  0300.00   5000.00  1000.00      1
 0.03883013E+02 0.07407872E-02-0.02961776E-05 0.05724304E-09-0.04086547E-13    2
-0.07121644E+05 0.02658211E+02 0.02872291E+02 0.03359716E-01-0.02664886E-04    3
 0.09807524E-08-0.16709571E-12-0.06829094E+05 0.07938372E+02                   4
O3                1212860   3             G  0300.00   5000.00  1000.00      1
 0.05429371E+02 0.01820380E-01-0.07705607E-05 0.14992929E-09-0.10755629E-13    2
 0.15235267E+05-0.03266386E+02 0.02462608E+02 0.09582781E-01-0.07087359E-04    3
 0.13633683E-08 0.02969647E-11 0.16061522E+05 0.12141870E+02                   4
OH                1212860   1H   1          G  0300.00   5000.00  1000.00      1
 0.02882730E+02 0.10139743E-02-0.02276877E-05 0.02174683E-09-0.05126305E-14    2
 0.03886888E+05 0.05595712E+02 0.03637266E+02 0.01850910E-02-0.16761646E-05    3
 0.02387202E-07-0.08431442E-11 0.03606781E+05 0.13588605E+01                   4
OH+               1212860   1H   1E  -1     G  0300.00   5000.00  1000.00      1
 0.02719058E+02 0.15085714E-02-0.05029369E-05 0.08261951E-09-0.04947452E-13    2
 0.15763414E+06 0.06234536E+02 0.03326978E+02 0.13457859E-02-0.03777167E-04    3
 0.04687749E-07-0.01780982E-10 0.15740294E+06 0.02744042E+02                   4
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OH-               1212860   1H   1E   1     G  0300.00   5000.00  1000.00      1
 0.02846204E+02 0.10418347E-02-0.02416850E-05 0.02483215E-09-0.07775605E-14    2
-0.01807280E+06 0.04422712E+02 0.03390037E+02 0.07922381E-02-0.01943429E-04    3
 0.02001769E-07-0.05702087E-11-0.01830493E+06 0.12498923E+01                   4
S                 121286S   1              G  0300.00   5000.00  1000.00      1
 0.02902148E+02-0.05484546E-02 0.02764576E-05-0.05017114E-09 0.03150684E-13    2
 0.03249423E+06 0.03838471E+02 0.03187329E+02-0.15957763E-02 0.02005531E-04    3
-0.15070814E-08 0.04931282E-11 0.03242259E+06 0.02414441E+02                   4
S(L)              120186S   1              L  0388.36   2000.00  1000.00      1
 0.03603667E+02 0.09903341E-02-0.10114410E-05 0.04053632E-08-0.05667913E-12    2
-0.08453839E+04-0.16344708E+02-0.12706310E+02 0.09072521E+00-0.01695178E-02    3
 0.13070636E-06-0.03527615E-09 0.12346069E+04 0.05621016E+03                   4
S(S)              120186S   1              S  0300.00   0388.36  1000.00      1
 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.00000000E+00 0.00000000E+00-0.05063702E+02 0.02881935E-01-0.02133020E-03    3
 0.08478786E-05-0.01734496E-07 0.07148263E+04 0.02871407E+03                   4
S+                121286S   1E  -1          G  0300.00   5000.00  1000.00      1
 0.02404600E+02 0.02410908E-02-0.02041779E-05 0.06592945E-09-0.05756939E-13    2
 0.15352225E+06 0.05924256E+02 0.02366100E+02 0.09130767E-02-0.02140283E-04    3
 0.02076177E-07-0.07133859E-11 0.15350910E+06 0.05993094E+02                   4
S-TRIAZINE         41687C   3N   3H   3     G  0300.00   4000.00  1000.00      1
 0.13036170E+02 0.07711820E-01-0.07724374E-05-0.04385191E-08 0.08298992E-12    2
 0.02251663E+06-0.04777676E+03 0.04493492E+01 0.02728306E+00 0.02309304E-04    3
-0.14968443E-07 0.04546753E-10 0.02703032E+06 0.02178518E+03                   4
S2                121386S   1              G  0300.00   5000.00  1000.00      1
 0.03904443E+02 0.06925733E-02-0.12330970E-06 0.08783809E-11 0.13746621E-14    2
 0.14256933E+05 0.04956834E+02 0.03157672E+02 0.03099480E-01-0.15607465E-05    3
-0.13578905E-08 0.11374435E-11 0.14391873E+05 0.08596062E+02                   4
SH                121286S   1H   1          G  0300.00   5000.00  1000.00      1
 0.03053810E+02 0.12588843E-02-0.04249169E-05 0.06929591E-09-0.04281691E-13    2
 0.15882250E+05 0.05973551E+02 0.04133326E+02-0.03787893E-02-0.02777854E-04    3
 0.05370112E-07-0.02394006E-10 0.15558623E+05 0.16115348E+00                   4
SI                 32989SI  1              G  0300.00   4000.00  1000.00      1
 0.02775845E+02-0.06213257E-02 0.04843696E-05-0.12756146E-09 0.11344818E-13    2
 0.05339790E+06 0.04543298E+02 0.03113515E+02-0.02330991E-01 0.03518530E-04    3
-0.02417573E-07 0.06391902E-11 0.05335061E+06 0.03009718E+02                   4
SI(L)              90589SI  1              L  0300.00   4500.00  1000.00      1
 0.03271263E+02 0.00000000E+00 0.00000000E+00 0.00000000E+00 0.00000000E+00    2
 0.04855057E+05-0.13290542E+02 0.03271263E+02 0.00000000E+00 0.00000000E+00    3
 0.00000000E+00 0.00000000E+00 0.04855058E+05-0.13290542E+02                   4
SI(NH2)3           42489SI  1N   3H   6     G  0300.00   3000.00  1000.00      1
 0.14065501E+02 0.07581744E-01-0.05168510E-05-0.06743626E-08 0.13979258E-12    2
-0.14144028E+05-0.04063873E+03 0.07598413E+02 0.02435266E+00-0.04296202E-04    3
-0.01756006E-06 0.10501017E-10-0.12653434E+05-0.07808647E+02                   4
SI(NH2)4           22790SI  1N   4H   8     G  0300.00   4000.00  1000.00      1
 0.02032107E+03 0.08289798E-01-0.07077612E-05-0.04340724E-08 0.07747068E-12    2
-0.05389855E+06-0.07730464E+03 0.08454529E+02 0.03465772E+00-0.04266782E-04    3
-0.02495363E-06 0.13654663E-10-0.05061518E+06-0.15143013E+02                   4
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SI(S)              90589SI  1               S  0300.00   2500.00  1000.00      1
 0.02530275E+02 0.08522433E-02-0.03223468E-05 0.12808208E-09-0.01850849E-12    2
-0.08395197E+04-0.12514782E+02 0.05746418E+01 0.10264855E-01-0.01775345E-03    3
 0.14575000E-07-0.04491292E-10-0.04969951E+04-0.03400242E+02                  4
SI2                90589SI  2               G  0300.00   2000.00  1000.00      1
 0.04232196E+02 0.04315355E-02-0.02964833E-05 0.09823294E-09-0.12962688E-13    2
 0.06964651E+06 0.03308527E+02 0.02993750E+02 0.06053689E-01-0.10158575E-04    3
 0.07909737E-07-0.02346083E-10 0.06987498E+06 0.09151741E+02                  4
SI2C              112989C   1SI  2          G  0300.00   5000.00  1000.00      1
 0.06334110E+02 0.12102520E-02-0.06798289E-05 0.02244432E-08-0.02280177E-12    2
 0.06227189E+06-0.07770097E+02 0.04157246E+02 0.07031825E-01-0.07263033E-04    3
 0.04633583E-07-0.14934475E-11 0.06292421E+06 0.03635125E+02                  4
SI2F6              42489SI  2F   6          G  0300.00   3000.00  1000.00      1
 0.01830047E+03 0.02868752E-01-0.04545576E-05-0.02497900E-08 0.06630658E-12    2
-0.02928185E+07-0.05760425E+03 0.09998134E+02 0.02170313E+00-0.03875091E-04    3
-0.16702523E-07 0.09407529E-10-0.02905482E+07-0.14228863E+02                  4
SI2H2              90589SI  2H   2          G  0300.00   2000.00  1000.00      1
 0.05778180E+02 0.04070596E-01-0.04259125E-05-0.07920228E-08 0.02379752E-11    2
 0.03980520E+06-0.05392375E+02 0.16247229E+01 0.14871029E-01-0.08707160E-04    3
-0.01699554E-09 0.10972211E-11 0.04095325E+06 0.16165730E+02                  4
SI2H3              90589SI  2H   3          G  0300.00   2000.00  1000.00      1
 0.07257627E+02 0.05123859E-01-0.07633465E-05-0.06662471E-08 0.02053052E-11    2
 0.05062055E+06-0.10314127E+02 0.03335404E+02 0.02155614E+00-0.02933937E-03    3
 0.02287784E-06-0.07272827E-10 0.05146157E+06 0.08656853E+02                  4
SI2H5              90589SI  2H   5          G  0300.00   2000.00  1000.00      1
 0.08451010E+02 0.09286371E-01-0.10911831E-05-0.14423673E-08 0.04250824E-11    2
 0.02472718E+06-0.01710331E+03 0.15788481E+01 0.03549382E+00-0.04267511E-03    3
 0.03059177E-06-0.09360425E-10 0.02630549E+06 0.16720734E+02                  4
SI2H6              90589SI  2H   6          G  0300.00   2000.00  1000.00      1
 0.08882090E+02 0.11513955E-01-0.12162159E-05-0.01905085E-07 0.05542379E-11    2
 0.05967241E+05-0.02265611E+03 0.05301921E+01 0.04184055E+00-0.04685249E-03    3
 0.03179525E-06-0.09484526E-10 0.07950597E+05 0.01880453E+03                  4
SI3                32989SI  3               G  0300.00   4000.00  1000.00      1
 0.07021584E+02 0.06981538E-02-0.04818729E-05 0.01720754E-08-0.01927024E-12    2
 0.07429956E+06-0.08179232E+02 0.05312161E+02 0.05920180E-01-0.05075224E-04    3
 0.05303866E-08 0.07031630E-11 0.07469501E+06 0.04036452E+01                  4
SI3H8              90589SI  3H   8          G  0300.00   2000.00  1000.00      1
 0.13422770E+02 0.15636323E-01-0.01936565E-04-0.02388329E-07 0.07120030E-11    2
 0.09165887E+05-0.04163000E+03 0.06319791E+01 0.06412995E+00-0.07772444E-03    3
 0.05486969E-06-0.16460971E-10 0.12092580E+05 0.02133318E+03                  4
SI3N4(A)           42589N   4SI  3          S  0300.00   3000.00  1000.00      1
 0.09667453E+02 0.11927212E-01-0.01709281E-04-0.10846074E-08 0.02713018E-11    2
-0.09324734E+06-0.04556492E+03 0.06631384E+02 0.02293928E+00-0.02152875E-03    3
 0.01766237E-06-0.06632214E-10-0.09241684E+06-0.03021795E+03                  4
SIC               112989C   1SI  1          G  0300.00   5000.00  1000.00      1
 0.05024270E+02-0.04920894E-02 0.03109315E-05-0.06901344E-09 0.05215735E-13    2
 0.08531026E+06-0.02478798E+02 0.02427812E+02 0.09551934E-01-0.02796633E-04    3
-0.13600122E-07 0.09196322E-10 0.08546512E+06 0.09179253E+02                  4
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SIC(B)            112989C   1SI  1          S  0300.00   4000.00  1000.00      1
 0.03548056E+02 0.03636817E-01-0.01734872E-04 0.03912869E-08-0.03337952E-12    2
-0.10188585E+05-0.01967253E+03-0.03551395E+01 0.15998806E-01-0.13933268E-04    3
 0.03314914E-07 0.07825957E-11-0.09294352E+05-0.15153885E+00                   4
SIC2              112989C   2SI  1          G  0300.00   5000.00  1000.00      1
 0.05753725E+02 0.02067546E-01-0.11325346E-05 0.03106456E-08-0.02799936E-12    2
 0.07200461E+06-0.05294926E+02 0.03647724E+02 0.08765100E-01-0.10798686E-04    3
 0.07974287E-07-0.02617042E-10 0.07258578E+06 0.05481049E+02                   4
SICL              121986SI  1CL  1          G  0300.00   2000.00  1000.00      1
 0.04258459E+02 0.04020317E-02-0.02888145E-05 0.10097771E-09-0.14110117E-13    2
 0.01775613E+06 0.04134521E+02 0.03096406E+02 0.05738623E-01-0.09740903E-04    3
 0.07643597E-07-0.02279178E-10 0.01796794E+06 0.09603212E+02                   4
SICL2             121986SI  1CL  2          G  0300.00   2000.00  1000.00      1
 0.06491204E+02 0.08242384E-02-0.05767737E-05 0.01972405E-08-0.02713757E-12    2
-0.02232408E+06-0.03570531E+02 0.03826666E+02 0.13082964E-01-0.02234087E-03    3
 0.01760741E-06-0.05267404E-10-0.02183869E+06 0.08965448E+02                   4
SICL2H2           121986SI  1H   2CL  2     G  0300.00   2000.00  1000.00      1
 0.07727079E+02 0.05034188E-01-0.10957459E-05-0.04419587E-08 0.16311241E-12    2
-0.04028605E+06-0.11708156E+02 0.11002086E+01 0.03262361E+00-0.04691994E-03    3
 0.03494565E-06-0.10362847E-10-0.03892086E+06 0.02022693E+03                   4
SICL3             121986SI  1CL  3          G  0300.00   2000.00  1000.00      1
 0.09098097E+02 0.14053526E-02-0.09317005E-05 0.02982296E-08-0.03822010E-12    2
-0.04140193E+06-0.14550117E+02 0.04485690E+02 0.02241754E+00-0.03794196E-03    3
 0.02973183E-06-0.08861335E-10-0.04055264E+06 0.07198771E+02                   4
SICL3H            121986SI  1H   1CL  3     G  0300.00   2000.00  1000.00      1
 0.09663121E+02 0.03563367E-01-0.12149114E-05-0.16090094E-10 0.05641710E-12    2
-0.06295557E+06-0.01894777E+03 0.02883769E+02 0.03308240E+00-0.05169241E-03    3
 0.03949918E-06-0.11721043E-10-0.06163323E+06 0.13374664E+02                   4
SICL4             121986SI  1CL  4          G  0300.00   2000.00  1000.00      1
 0.11709377E+02 0.01972091E-01-0.12690771E-05 0.03900188E-08-0.04756468E-12    2
-0.08347808E+06-0.02791153E+03 0.05252110E+02 0.03122067E+00-0.05254593E-03    3
 0.04102707E-06-0.12199071E-10-0.08228177E+06 0.02575727E+02                   4
SICLH3            121986SI  1H   3CL  1     G  0300.00   2000.00  1000.00      1
 0.05964237E+02 0.06278087E-01-0.08205634E-05-0.09280558E-08 0.02796642E-11    2
-0.01854309E+06-0.06395305E+02 0.05057173E+01 0.02703377E+00-0.03301474E-03    3
 0.02302732E-06-0.06778703E-10-0.01730819E+06 0.02043167E+03                   4
SIF                42489SI  1F   1          G  0300.00   3000.00  1000.00      1
 0.04120066E+02 0.03548820E-02-0.07200222E-06-0.02190434E-09 0.06764591E-13    2
-0.07561378E+05 0.02784246E+02 0.03144947E+02 0.02588557E-01-0.05795912E-05    3
-0.01807278E-07 0.10411718E-11-0.07294439E+05 0.07876774E+02                   4
SIF(NH2)2          22790SI  1F   1N   2H   4G  0300.00   4000.00  1000.00      1
 0.12879436E+02 0.04598535E-01-0.04004440E-05-0.02374189E-08 0.04255211E-12    2
-0.05238278E+06-0.03653418E+03 0.07210094E+02 0.01764697E+00-0.02542059E-04    3
-0.12422138E-07 0.06989787E-10-0.05086706E+06-0.07024622E+02                   4
SIF(NH2)3          42489SI  1N   3H   6F   1G  0300.00   3000.00  1000.00      1
 0.16111795E+02 0.08329222E-01-0.06023787E-05-0.07470125E-08 0.15707311E-12    2
-0.09137007E+06-0.05098123E+03 0.08388268E+02 0.02746622E+00-0.04455674E-04    3
-0.01955732E-06 0.11407210E-10-0.08947806E+06-0.11381777E+02                   4
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SIF2                42489SI  1F   2          G  0300.00   3000.00  1000.00      1
 0.06142470E+02 0.07807974E-02-0.13393119E-06-0.06264839E-09 0.01725138E-12    2
-0.07744042E+06-0.04712327E+02 0.03845345E+02 0.06038465E-01-0.11677323E-05    3
-0.04579553E-07 0.02607414E-10-0.07681633E+06 0.07272983E+02                   4
SIF2(NH2)2          42489SI  1N   2H   4F   2G  0300.00   3000.00  1000.00      1
 0.14414775E+02 0.06110646E-01-0.04871145E-05-0.05455935E-08 0.11727140E-12    2
-0.12927572E+06-0.04308682E+03 0.07634268E+02 0.02315843E+00-0.04193827E-04    3
-0.01715350E-06 0.10164619E-10-0.12764102E+06-0.08419031E+02                   4
SIF2N               42489SI  1N   1F   2    G  0300.00   3000.00  1000.00      1
 0.08687337E+02 0.11934885E-02-0.01992660E-05-0.09951333E-09 0.02704383E-12    2
-0.03463832E+06-0.14940526E+02 0.05102583E+02 0.09456606E-01-0.01819383E-04    3
-0.07309616E-07 0.04178902E-10-0.03367293E+06 0.03734423E+02                   4
SIF2NH2             42489SI  1N   1F   2H   2G  0300.00   3000.00  1000.00      1
 0.09872415E+02 0.03722112E-01-0.03271338E-05-0.03321674E-08 0.07293692E-12    2
-0.08751628E+06-0.01899095E+03 0.05890444E+02 0.12851282E-01-0.01863556E-04    3
-0.08718963E-07 0.04848951E-10-0.08644527E+06 0.01756162E+02                   4
SIF3                42489SI  1F   3          G  0300.00   3000.00  1000.00      1
 0.08524790E+02 0.13237924E-02-0.02104278E-05-0.11495040E-09 0.03055301E-12    2
-0.12235223E+06-0.15502343E+02 0.04662868E+02 0.10087878E-01-0.01805544E-04    3
-0.07769299E-07 0.04377851E-10-0.12129652E+06 0.04672966E+02                   4
SIF3NH              42489SI  1N   1F   3H   1G  0300.00   3000.00  1000.00      1
 0.11637665E+02 0.02880768E-01-0.03357310E-05-0.02584594E-08 0.06162371E-12    2
-0.12958909E+06-0.02590717E+03 0.06013822E+02 0.15977294E-01-0.02791466E-04    3
-0.12141200E-07 0.06927415E-10-0.12809741E+06 0.03316770E+02                   4
SIF3NH2             42489SI  1N   1F   3H   2G  0300.00   3000.00  1000.00      1
 0.12109636E+02 0.04383282E-01-0.04142245E-05-0.03989090E-08 0.08958954E-12    2
-0.16417679E+06-0.03046928E+03 0.06229403E+02 0.01778015E+00-0.02612304E-04    3
-0.12672434E-07 0.07044556E-10-0.16258489E+06 0.02045440E+01                   4
SIF3NHSIH3          42489SI  2N   1H   4F   3G  0300.00   3000.00  1000.00      1
 0.16699406E+02 0.07789784E-01-0.08110570E-05-0.07650199E-08 0.01773956E-11    2
-0.16734123E+06-0.05080007E+03 0.06216046E+02 0.02939330E+00-0.02717745E-04    3
-0.01982877E-06 0.10027676E-10-0.16422818E+06 0.04858261E+02                   4
SIF3NSIH3           42489SI  2N   1H   3F   3G  0300.00   3000.00  1000.00      1
 0.15991462E+02 0.06371085E-01-0.07256823E-05-0.06292690E-08 0.14951566E-12    2
-0.13311576E+06-0.04495265E+03 0.06404371E+02 0.02601982E+00-0.02491543E-04    3
-0.01769542E-06 0.08919883E-10-0.13025197E+06 0.06002945E+02                   4
SIF4                41389F   4SI  1          G  0300.00   2000.00  1000.00      1
 0.09985301E+02 0.03532637E-01-0.11973776E-05-0.10365486E-09 0.08661585E-12    2
-0.01977199E+07-0.02472643E+03 0.02147416E+02 0.03402219E+00-0.04756873E-03    3
 0.03252196E-06-0.08819304E-10-0.01960449E+07 0.13463150E+02                   4
SIFH3               42489SI  1F   1H   3    G  0300.00   3000.00  1000.00      1
 0.06799678E+02 0.04747086E-01-0.04767066E-05-0.04814665E-08 0.11077613E-12    2
-0.04577024E+06-0.12614326E+02 0.02032189E+02 0.13413632E-01-0.02806381E-05    3
-0.07803291E-07 0.03337474E-10-0.04421627E+06 0.13187677E+02                   4
SIFNH               42489SI  1N   1F   1H   1G  0300.00   3000.00  1000.00      1
 0.07163298E+02 0.15213245E-02-0.15363371E-06-0.11959331E-09 0.02684099E-12    2
-0.09065496E+05-0.06764144E+02 0.05390691E+02 0.06071319E-01-0.13594903E-05    3
-0.04267435E-07 0.02603153E-10-0.08644237E+05 0.02272064E+02                   4
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SIFNH2             22790F   1SI  1N   1H   2G  0300.00   4000.00  1000.00      1
 0.08017582E+02 0.03209103E-01-0.03361364E-05-0.01796536E-08 0.03385552E-12    2
-0.04313426E+06-0.14870236E+02 0.04214050E+02 0.11054231E-01-0.10147254E-05    3
-0.07143728E-07 0.03634922E-10-0.04200629E+06 0.05318889E+02                   4
SIH               121986SI  1H   1          G  0300.00   2000.00  1000.00      1
 0.03110430E+02 0.10949460E-02 0.02898628E-06-0.02745104E-08 0.07051799E-12    2
 0.04516897E+06 0.04193487E+02 0.03836009E+02-0.02702656E-01 0.06849070E-04    3
-0.05424184E-07 0.14721313E-11 0.04507593E+06 0.09350778E+01                   4
SIH2               42489SI  1H   2          G  0300.00   3000.00  1000.00      1
 0.04142390E+02 0.02150191E-01-0.02190730E-05-0.02073725E-08 0.04741018E-12    2
 0.03110483E+06 0.02930745E+01 0.03475092E+02 0.02139338E-01 0.07672305E-05    3
 0.05217668E-08-0.09898824E-11 0.03147397E+06 0.04436585E+02                   4
SIH2CL            121986SI  1H   2CL  1     G  0300.00   2000.00  1000.00      1
 0.05555901E+02 0.04046479E-01-0.06581751E-05-0.05027548E-08 0.15991101E-12    2
 0.01912428E+05-0.01906889E+02 0.01699256E+02 0.01961407E+00-0.02622973E-03    3
 0.01936416E-06-0.05846399E-10 0.02743661E+05 0.01683132E+03                   4
SIH2F              42489SI  1F   1H   2     G  0300.00   3000.00  1000.00      1
 0.06020398E+02 0.03074039E-01-0.03248886E-05-0.03052243E-08 0.07098090E-12    2
-0.02347670E+06-0.05919595E+02 0.02782566E+02 0.09148257E-01-0.04186787E-05    3
-0.05388971E-07 0.02412133E-10-0.02244201E+06 0.11528536E+02                   4
SIH2F2             42489SI  1H   2F   2     G  0300.00   3000.00  1000.00      1
 0.07997762E+02 0.03911538E-01-0.04222679E-05-0.03913812E-08 0.09171569E-12    2
-0.09682880E+06-0.16223999E+02 0.02701455E+02 0.14565451E-01-0.11633003E-05    3
-0.09685830E-07 0.04769590E-10-0.09522440E+06 0.12006887E+02                   4
SIH3               42489SI  1H   3          G  0300.00   3000.00  1000.00      1
 0.05015906E+02 0.03732750E-01-0.03609053E-05-0.03729193E-08 0.08468491E-12    2
 0.02190233E+06-0.04291368E+02 0.02946733E+02 0.06466763E-01 0.05991653E-05    3
-0.02218413E-07 0.03052669E-11 0.02270173E+06 0.07347948E+02                   4
SIH3NH2            42489SI  1N   1H   5     G  0300.00   3000.00  1000.00      1
 0.08109945E+02 0.07215752E-01-0.06052251E-05-0.07086088E-08 0.15578638E-12    2
-0.08999782E+05-0.16516504E+02 0.02936348E+02 0.16747041E-01-0.03232858E-05    3
-0.09171970E-07 0.03979516E-10-0.07334716E+05 0.11414373E+02                   4
SIH3NHSIH3         42489SI  2N   1H   7     G  0300.00   3000.00  1000.00      1
 0.12652963E+02 0.10667481E-01-0.10073358E-05-0.10812221E-08 0.02452363E-11    2
-0.12497210E+05-0.03441428E+03 0.02468749E+02 0.02940254E+00-0.06248179E-05    3
-0.01731461E-06 0.07545261E-10-0.09209690E+05 0.02059559E+03                   4
SIH3NSIH3          42489SI  2N   1H   6     G  0300.00   3000.00  1000.00      1
 0.12014620E+02 0.09187517E-01-0.09159516E-05-0.09380967E-08 0.02156435E-11    2
 0.01965065E+06-0.02978185E+03 0.02827574E+02 0.02580646E+00-0.04200477E-05    3
-0.15038588E-07 0.06388324E-10 0.02265351E+06 0.01997012E+03                   4
SIH4              121386SI  1H   4          G  0300.00   4000.00  1000.00      1
 0.06893873E+02 0.04030500E-01-0.04183314E-05-0.02291394E-08 0.04384766E-12    2
 0.11070374E+04-0.01749116E+03 0.02475166E+02 0.09003721E-01 0.02185394E-04    3
-0.02681423E-07-0.06621080E-11 0.02925488E+05 0.07751014E+02                   4
SIHCL2            121986SI  1H   1CL  2     G  0300.00   2000.00  1000.00      1
 0.07229734E+02 0.02869205E-01-0.08849876E-05-0.07495865E-09 0.05752338E-12    2
-0.01971399E+06-0.07052663E+02 0.02368353E+02 0.02401088E+00-0.03717219E-03    3
 0.02851997E-06-0.08530494E-10-0.01875884E+06 0.16145866E+02                   4
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SIHF              42489SI  1F   1H   1     G  0300.00   3000.00  1000.00      1
 0.05073508E+02 0.15332789E-02-0.01840658E-05-0.14400376E-09 0.03452517E-12    2
-0.01973879E+06-0.10795069E+01 0.03223727E+02 0.04981220E-01-0.03173051E-05    3
-0.02822231E-07 0.12478316E-11-0.01914167E+06 0.08906423E+02                   4
SIHF2             42489SI  1H   1F   2     G  0300.00   3000.00  1000.00      1
 0.07216536E+02 0.02253240E-01-0.02737472E-05-0.02173460E-08 0.05255331E-12    2
-0.07280241E+06-0.09783487E+02 0.03377237E+02 0.10366072E-01-0.12390823E-05    3
-0.07267981E-07 0.03794989E-10-0.07168358E+06 0.10521894E+02                   4
SIHF3             42489SI  1H   1F   3     G  0300.00   3000.00  1000.00      1
 0.09363567E+02 0.02947555E-01-0.03577633E-05-0.02858224E-08 0.06915728E-12    2
-0.14860736E+06-0.02169452E+03 0.03918053E+02 0.14639172E-01-0.01856069E-04    3
-0.10582003E-07 0.05617543E-10-0.14704386E+06 0.07024261E+02                   4
SIN               42489SI  1N   1           G  0300.00   3000.00  1000.00      1
 0.04122909E+02 0.03521457E-02-0.07161080E-06-0.02154956E-09 0.06667570E-13    2
 0.05683927E+06 0.02389837E+02 0.03149181E+02 0.02584376E-01-0.05804624E-05    3
-0.01805626E-07 0.10410949E-11 0.05710563E+06 0.07474389E+02                   4
SINH              42489SI  1N   1H   1     G  0300.00   3000.00  1000.00      1
 0.04928800E+02 0.16286244E-02-0.13671971E-06-0.13904604E-09 0.02998968E-12    2
 0.01767789E+06-0.02823472E+02 0.03166974E+02 0.05805822E-01-0.09524443E-05    3
-0.03991892E-07 0.02283188E-10 0.01813560E+06 0.06298439E+02                   4
SINH2             42489SI  1N   1H   2     G  0300.00   3000.00  1000.00      1
 0.05186435E+02 0.03016656E-01-0.02165476E-05-0.02722658E-08 0.05706182E-12    2
 0.02270507E+06-0.12421399E+01 0.03362769E+02 0.07261175E-01-0.08721233E-05    3
-0.04400014E-07 0.02419532E-10 0.02318445E+06 0.08223867E+02                   4
SN                121286S  1N   1           G  0300.00   5000.00  1000.00      1
 0.03888286E+02 0.06778427E-02-0.02725308E-05 0.05135927E-09-0.03593836E-13    2
 0.03044496E+06 0.04194291E+02 0.03407345E+02 0.01797887E-01-0.02018969E-04    3
 0.02107857E-07-0.09527593E-11 0.03062373E+06 0.06821481E+02                   4
SO                121286S  1O   1           G  0300.00   5000.00  1000.00      1
 0.04021077E+02 0.02584856E-02 0.08948142E-06-0.03580144E-09 0.03228430E-13    2
-0.07119620E+04 0.03452522E+02 0.03080401E+02 0.01803105E-01 0.06705022E-05    3
-0.02069005E-07 0.08514657E-11-0.03986163E+04 0.08581028E+02                   4
SO2               121286S  1O   2           G  0300.00   5000.00  1000.00      1
 0.05254498E+02 0.01978545E-01-0.08204226E-05 0.15763830E-09-0.11204512E-13    2
-0.03756885E+06-0.11460563E+01 0.02911438E+02 0.08103022E-01-0.06906710E-04    3
 0.03329015E-07-0.08777121E-11-0.03687881E+06 0.11117403E+02                   4
SO3               121286S  1O   3           G  0300.00   5000.00  1000.00      1
 0.07050668E+02 0.03246560E-01-0.14088974E-05 0.02721535E-08-0.01942364E-12    2
-0.05020667E+06-0.11064426E+02 0.02575282E+02 0.15150916E-01-0.12298717E-04    3
 0.04240257E-07-0.05266812E-11-0.04894410E+06 0.12195116E+02                   4
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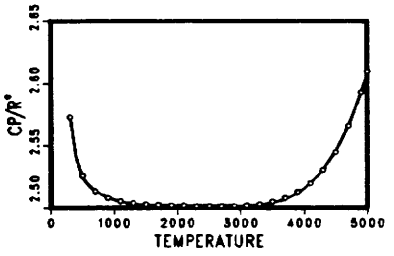
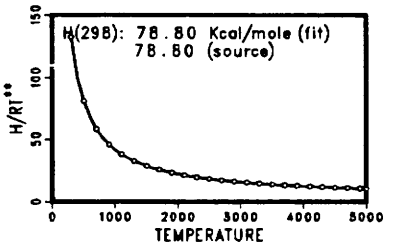
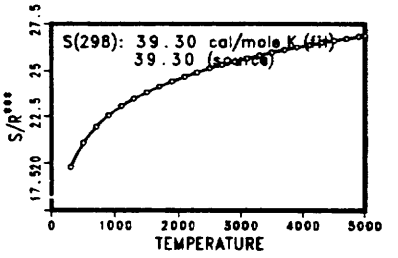
APPENDIX C. GRAPHICAL REPRESENTATION OF DATA BASE

Species: AL ALUMINUM, MONATOMIC GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.02736825E+02	-0.05912374E-02	-0.04033937E-05	0.02322343E-07	-0.01705599E-10	0.03886794E+06	0.04363879E+02
0600-5000K	0.02559589E+02	-0.10632239E-03	0.07202828E-06	-0.02121105E-09	0.02289429E-13	0.03890214E+06	0.05234522E+02







Source: SNL FIT TO JANAF TABLES

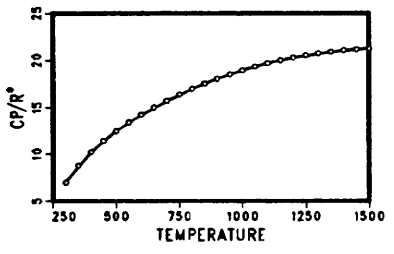
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

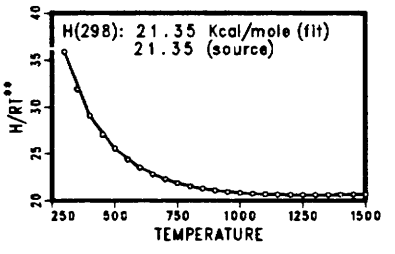
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

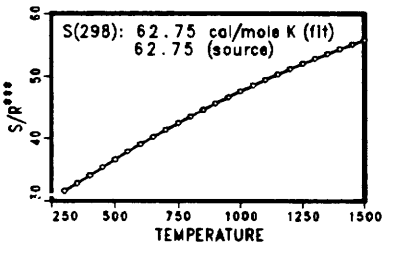
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: AL2H6 GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	-0.06800681E+02	0.05080744E+00	0.10397471E-04	-0.11195819E-06	0.08459155E-09	0.10605371E+05	0.05554526E+03
0600-1500K	0.02634884E+02	0.02135952E+00	0.03154151E-05	-0.07684674E-07	0.02335831E-10	0.08871346E+05	0.09827515E+02







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

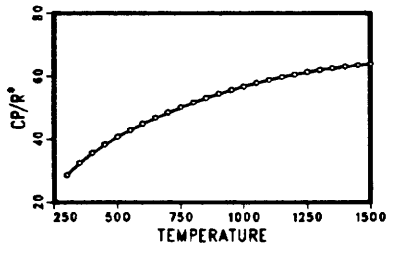
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

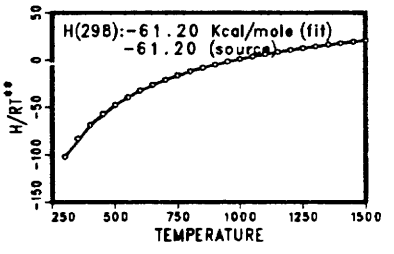
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

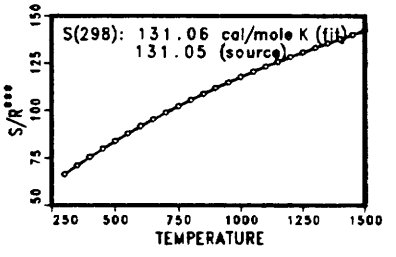
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: AL2ME6 ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	-0.07159750E+01	0.10671087E+00	0.02117604E-03	-0.02193211E-05	0.16441438E-09	-0.03515546E+06	0.03890762E+03
0600-1500K	0.01773147E+03	0.04935747E+00	0.11968535E-05	-0.16398263E-07	0.04890867E-10	-0.03855560E+06	-0.05053298E+03







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

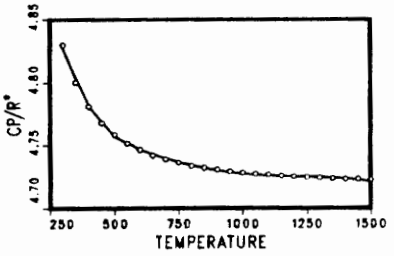
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

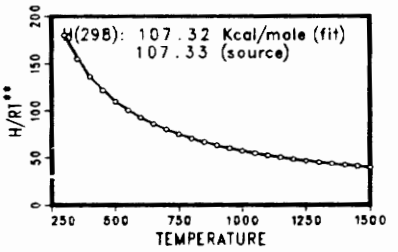
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

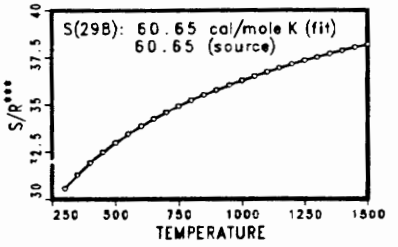
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: ALAS GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.05047764E+02	-0.06419947E-02	-0.14320714E-05	0.04754390E-07	-0.03297621E-10	0.05254264E+06	0.01985205E+02
0600-1500K	0.04790026E+02	-0.01908225E-03	-0.01983390E-05	0.02239358E-08	-0.06904706E-12	0.05259290E+06	0.03259703E+02





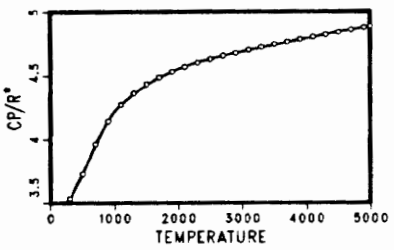


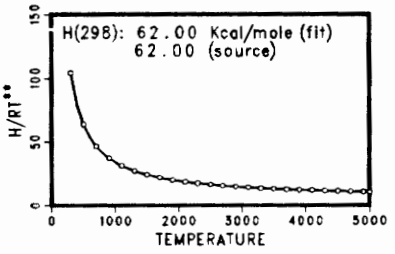
Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

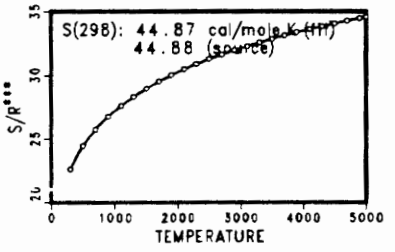
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: ALH ALUMINUM MONOHYDRIDE GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03071503E+02	0.02165549E-01	-0.03275638E-04	0.04136983E-07	-0.01877120E-10	0.03021221E+06	0.04548855E+02
1000-5000K	0.03392644E+02	0.12153990E-02	-0.04676595E-05	0.08691624E-09	-0.06022668E-13	0.03006845E+06	0.02758899E+02





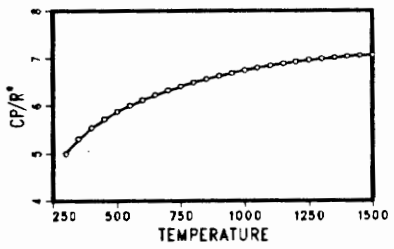


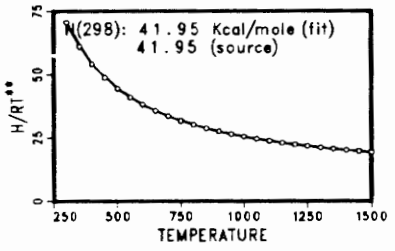
Source: SNL FIT TO JANAF TABLES

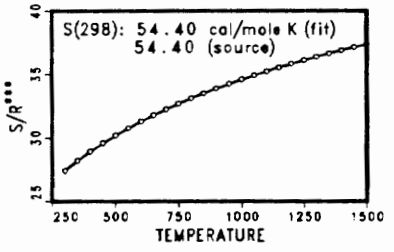
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: ALH2 GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.02442136E+02	0.09915913E-01	0.02471082E-05	-0.02119583E-06	0.01710233E-09	0.01997587E+06	0.10652699E+02
0600-1500K	0.04486543E+02	0.03128831E-01	-0.01969438E-05	-0.10160304E-08	0.03497468E-11	0.01960959E+06	0.08167897E+01







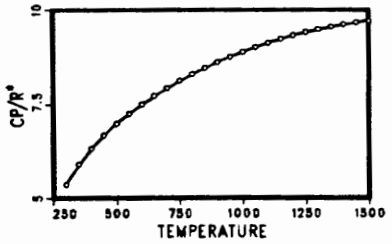
Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

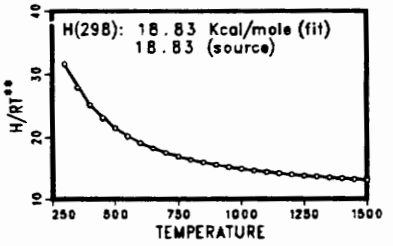
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

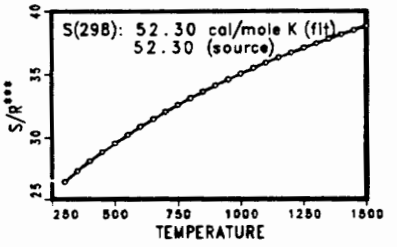
Species: ALH3 GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.10083231E+01	0.16403245E-01	0.01976746E-04	-0.03528558E-06	0.02753377E-09	0.08484656E+05	0.15858377E+02
0600-1500K	0.04186837E+02	0.06159249E-01	-0.03877593E-06	-0.02061928E-07	0.06600276E-11	0.07908078E+05	0.05134396E+01







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

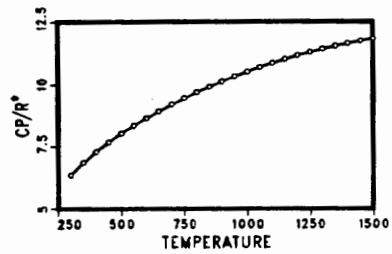
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

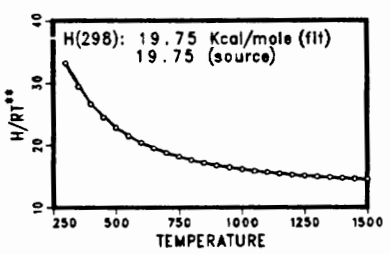
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

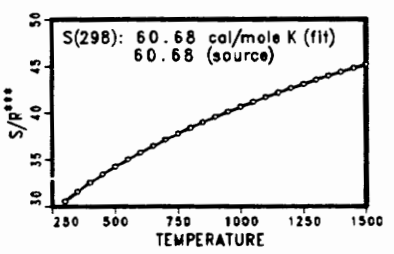
Species: ALME ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.02664176E+02	0.13249141E-01	0.02525847E-04	-0.02394396E-06	0.01761854E-09	0.08574173E+05	0.11474494E+02
0600-1500K	0.04662737E+02	0.07097939E-01	0.02520013E-05	-0.02114863E-07	0.06097489E-11	0.08203227E+05	0.01769244E+02







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

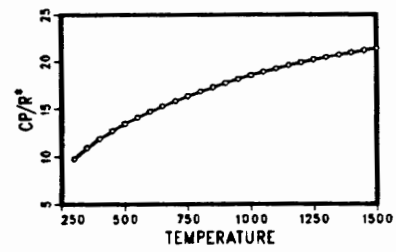
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

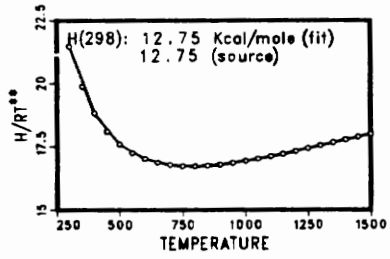
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

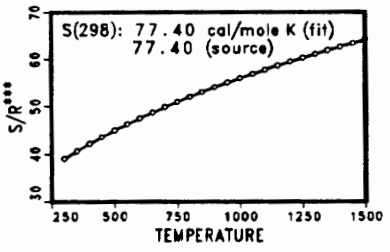
Species: ALME2 ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.09494573E+01	0.03206353E+00	0.06134020E-04	-0.06500042E-06	0.04911485E-09	0.04761408E+05	0.02419465E+03
0600-1500K	0.06481282E+02	0.14746049E-01	0.05816529E-05	-0.04621347E-07	0.13960405E-11	0.03745072E+05	-0.02603325E+02







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

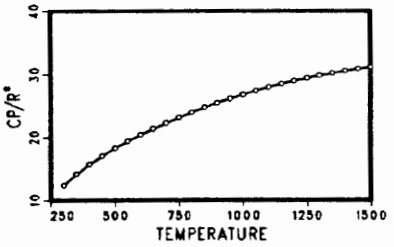
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

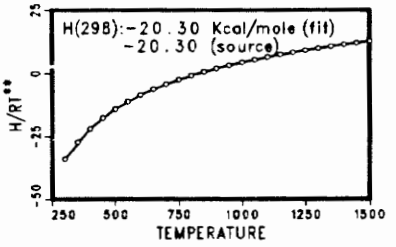
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

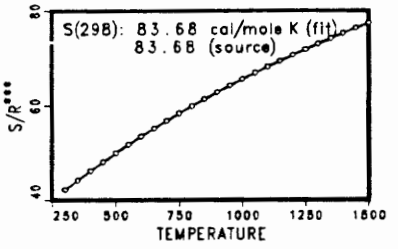
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: ALME3 ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	-0.07027567E+01	0.04682764E+00	0.11499028E-04	-0.09160441E-06	0.06687293E-09	-0.12037989E+05	0.03232771E+03
0600-1500K	0.06654948E+02	0.02455144E+00	0.11765745E-05	-0.07815023E-07	0.02255622E-10	-0.13409524E+05	-0.03454481E+02





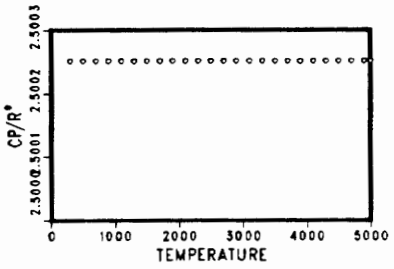


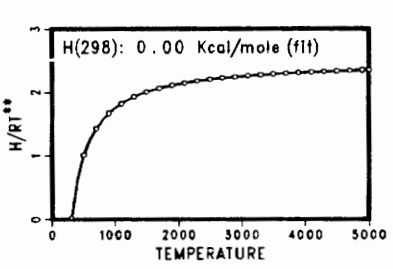
Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

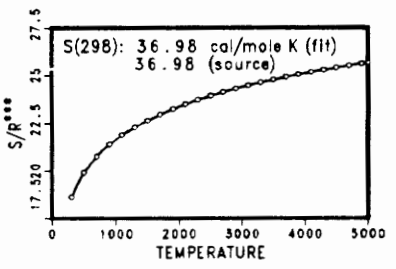
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: AR ARGON, MONATOMIC (REF ST) GAS As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02500000E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	-0.07453750E+04	0.04366000E+02
1000-5000K	0.02500000E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	-0.07453750E+04	0.04366000E+02





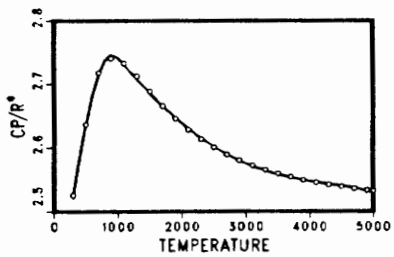


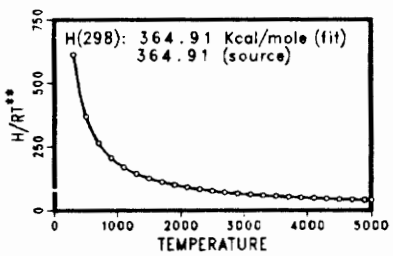
Source: NASA FIT TO JANAF TABLES

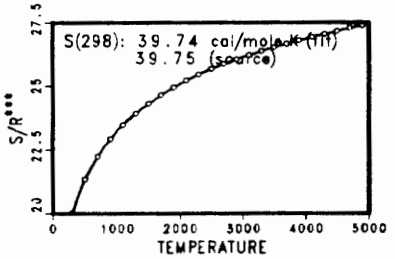
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: AR+ ARGON, UNIPOSITIVE ION GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02301341E+02	0.08035528E-02	-0.01758805E-05	-0.01781093E-08	-0.08937268E-13	0.01829281E+07	0.06659358E+02
1000-5000K	0.02864864E+02	-0.12035732E-03	-0.10651992E-07	0.09074839E-10	-0.09623876E-14	0.01827230E+07	0.03543584E+02







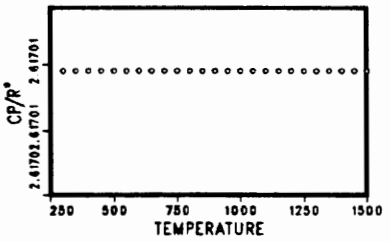
Source: SNL FIT TO JANAF TABLES

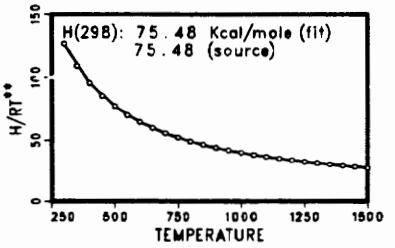
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

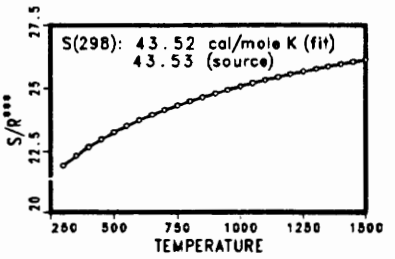
Species: AS GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.02617010E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.03720454E+06	0.06995524E+02
0600-1500K	0.02617010E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.03720454E+06	0.06995524E+02







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

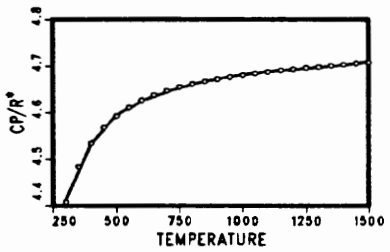
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

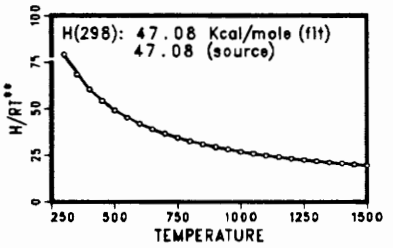
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

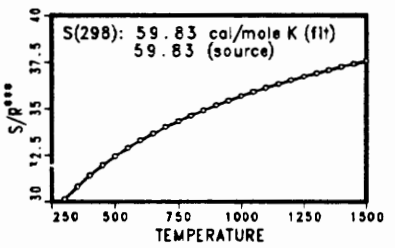
Species: AS2 GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.03682891E+02	0.03121811E-01	-0.10740519E-05	-0.05629472E-07	0.05178811E-10	0.02247355E+06	0.08283423E+02
0600-1500K	0.04394201E+02	0.05389968E-02	-0.02379401E-05	-0.06541924E-09	0.05184186E-12	0.02235093E+06	0.04897918E+02







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

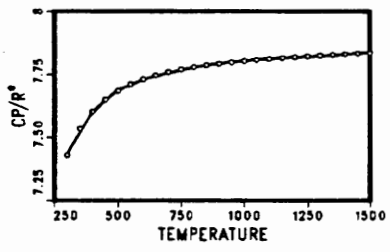
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

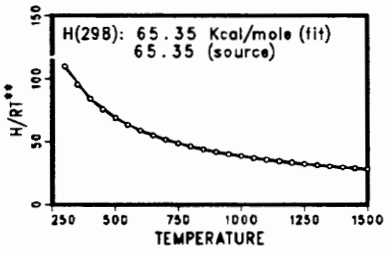
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

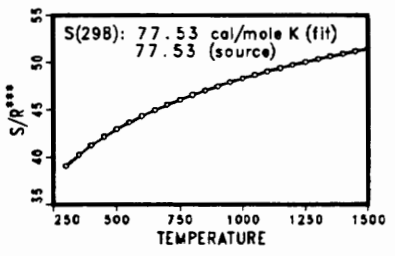
Species: AS3 GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.06403142E+02	0.04477098E-01	-0.01866642E-04	-0.07394750E-07	0.07012752E-10	0.03080965E+06	0.13371355E+01
0600-1500K	0.07404036E+02	0.07818425E-02	-0.03918297E-05	-0.05203629E-09	0.06291907E-12	0.03063825E+06	-0.03417323E+02







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

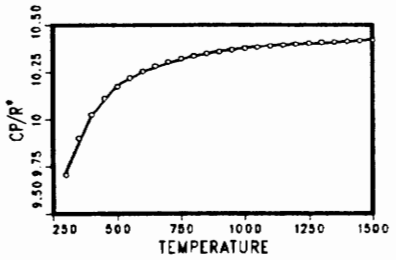
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

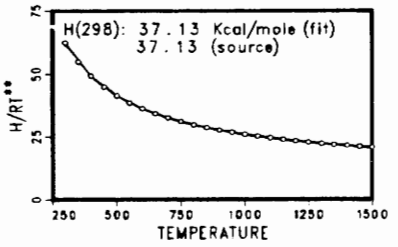
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

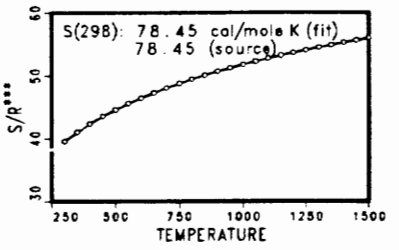
Species: AS4 GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.07853760E+02	0.07916509E-01	-0.02329820E-04	-0.15263119E-07	0.13774348E-10	0.16036290E+05	-0.07409755E+02
0600-1500K	0.09695766E+02	0.13062585E-02	-0.05519564E-05	-0.02150873E-08	0.14579349E-12	0.15717321E+05	-0.16188696E+02







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

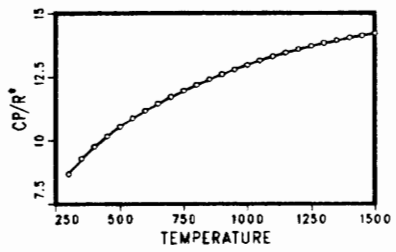
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

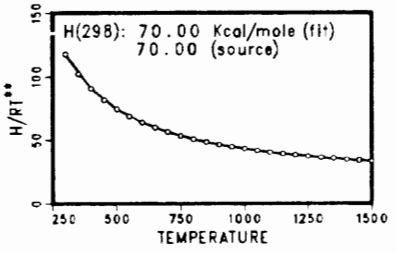
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

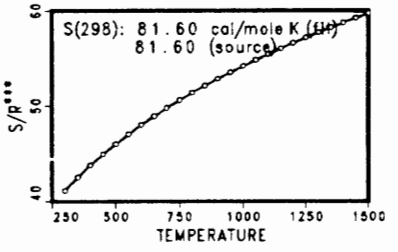
Species: ASALME ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.04053423E+02	0.01726125E+00	0.01833498E-04	-0.03386952E-06	0.02626980E-09	0.03329309E+06	0.12996653E+02
0600-1500K	0.07127107E+02	0.07357863E-01	0.02300796E-06	-0.02226398E-07	0.06927227E-11	0.03273438E+06	-0.01847179E+02







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

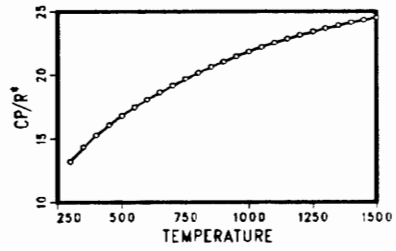
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

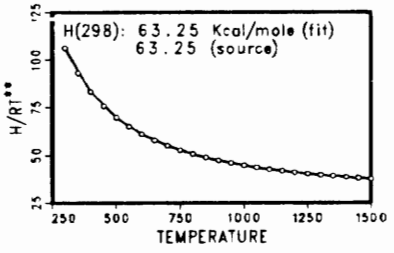
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

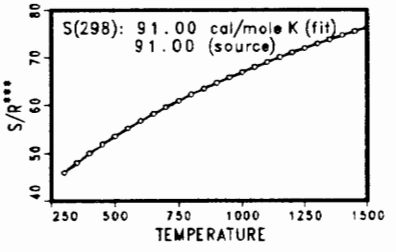
Species: ASALME2 ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.04808530E+02	0.03067687E+00	0.05048000E-04	-0.05908099E-06	0.04462290E-09	0.02908816E+06	0.09471621E+02
0600-1500K	0.09909938E+02	0.14638499E-01	0.04118730E-05	-0.04444657E-07	0.13295010E-11	0.02815111E+06	-0.15235312E+02







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

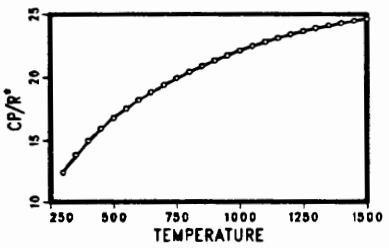
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

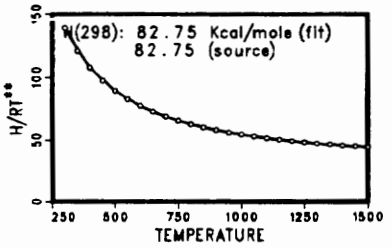
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

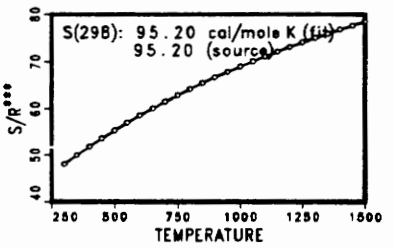
Species: ASGAET ("ET" = C2H5, ETHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.06364698E+01	0.04382467E+00	0.06144686E-04	-0.09491641E-06	0.07374197E-09	0.03960893E+06	0.03164673E+03
0600-1500K	0.09081073E+02	0.16746316E-01	0.12831301E-06	-0.05590435E-07	0.01781314E-10	0.03807443E+06	-0.09142782E+02







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

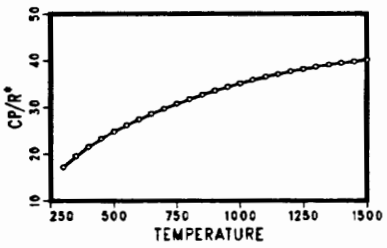
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

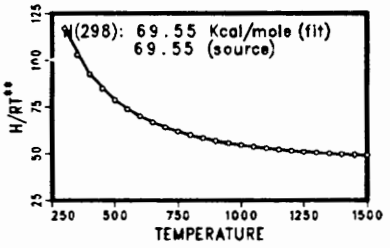
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

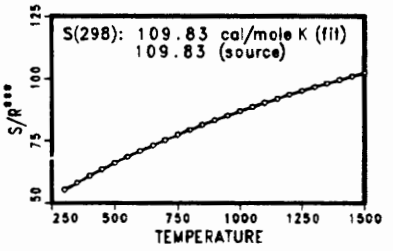
Species: ASGAET2 ("ET" = C2H5, ETHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	-0.03539248E+01	0.06369772E+00	0.13597417E-04	-0.12861423E-06	0.09572181E-09	0.03236903E+06	0.03865086E+03
0600-1500K	0.10324288E+02	0.03073570E+00	0.10863354E-05	-0.09971948E-07	0.02945979E-10	0.03039490E+06	-0.13164016E+02







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

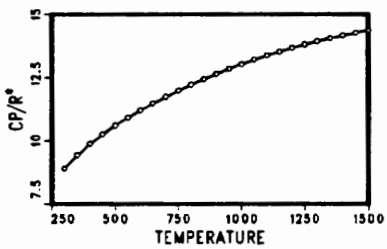
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

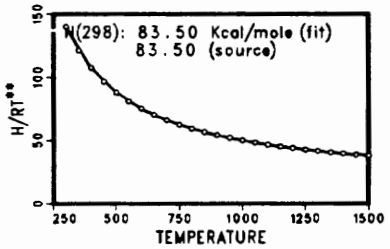
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

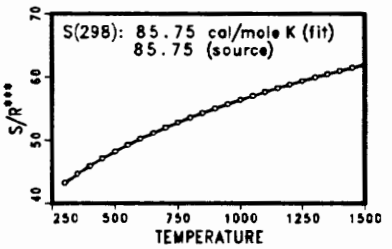
Species: ASGAME ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.04877266E+02	0.14825589E-01	0.16521240E-05	-0.02712058E-06	0.02080195E-09	0.03994071E+06	0.11076703E+02
0600-1500K	0.07322183E+02	0.06995478E-01	0.10693509E-06	-0.01995283E-07	0.06040446E-11	0.03949448E+06	-0.07416680E+01







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

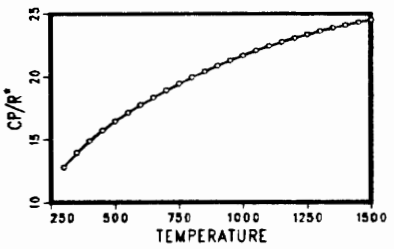
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

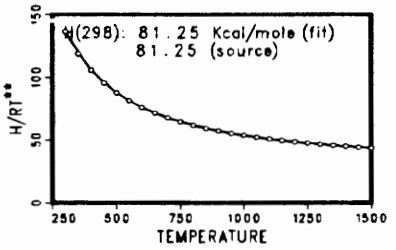
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

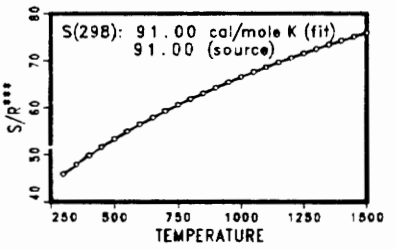
Species: ASGAME2 ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.04382076E+02	0.03056344E+00	0.05477067E-04	-0.05834108E-06	0.04373509E-09	0.03827434E+06	0.11911109E+02
0600-1500K	0.09352436E+02	0.15048197E-01	0.05157975E-05	-0.04553518E-07	0.13487630E-11	0.03735855E+06	-0.12181144E+02







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

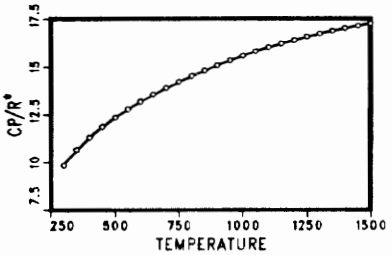
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

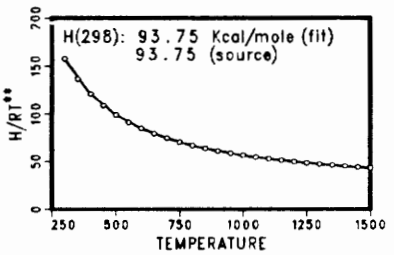
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

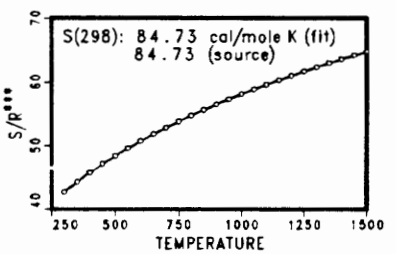
Species: ASGAMEH ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.03585119E+02	0.02336317E+00	0.02873356E-04	-0.04737894E-06	0.03674461E-09	0.04512702E+06	0.15471604E+02
0600-1500K	0.07842794E+02	0.09682097E-01	0.10603061E-06	-0.02991402E-07	0.09382673E-11	0.04435297E+06	-0.05093455E+02







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

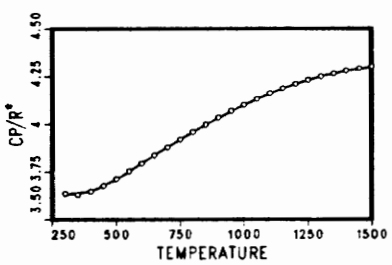
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

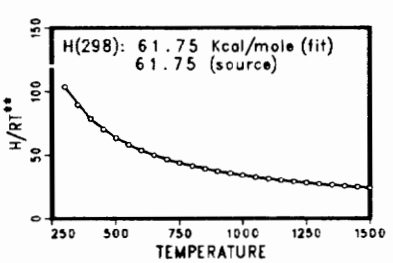
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

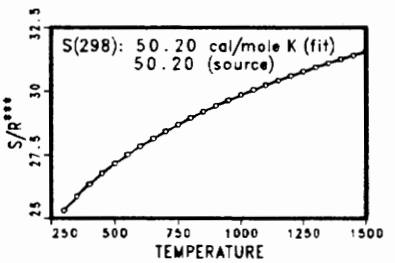
Species: ASH GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.03865843E+02	-0.11575710E-02	-0.03494371E-05	0.07079686E-07	-0.06014027E-10	0.02996829E+06	0.03549869E+02
0600-1500K	0.03219848E+02	0.10012498E-02	-0.04874997E-08	-0.11076533E-09	-0.09254321E-13	0.03008175E+06	0.06647311E+02







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

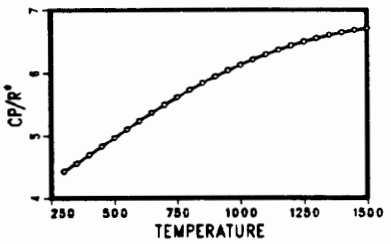
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

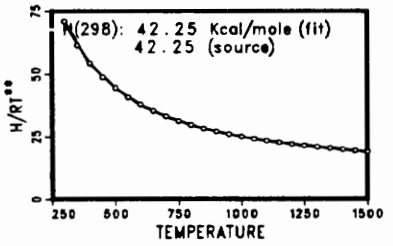
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

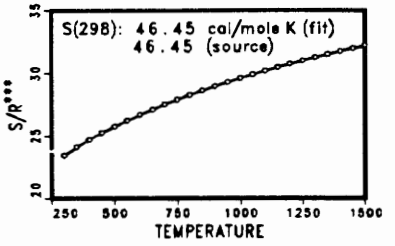
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: ASH2 GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.03778945E+02	0.01759233E-01	0.08070806E-05	0.02358763E-07	-0.03043521E-10	0.02004861E+06	0.12729740E+01
0600-1500K	0.03428307E+02	0.03181140E-01	0.14604843E-06	-0.07937145E-08	0.01694413E-11	0.02010282E+06	0.02904703E+02







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

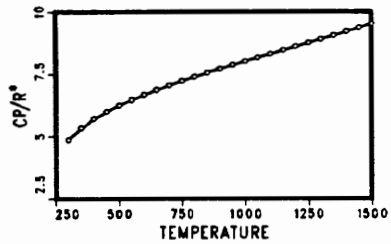
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

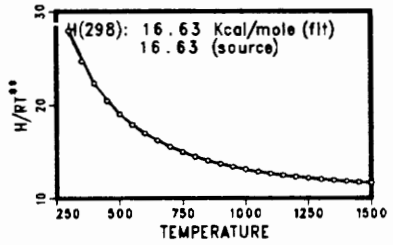
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

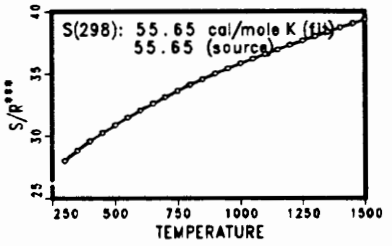
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: ASH3 GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.09446356E+01	0.15084686E-01	0.12016960E-05	-0.03397465E-06	0.02767656E-09	0.07459168E+05	0.01832267E+03
0600-1500K	0.04172022E+02	0.04371322E-01	0.02177574E-05	-0.11832641E-08	0.04536373E-11	0.06882915E+05	0.02803476E+02







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

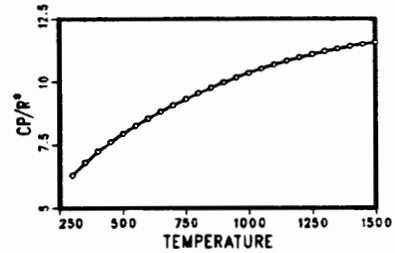
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

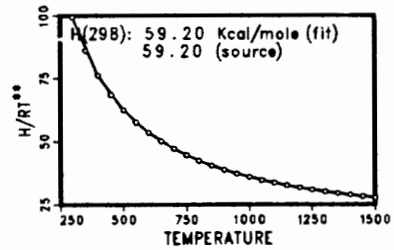
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

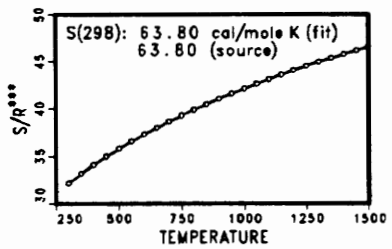
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: ASME ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.02625270E+02	0.13252423E-01	0.02441628E-04	-0.02419566E-06	0.01786943E-09	0.02844080E+06	0.13273359E+02
0600-1500K	0.04657260E+02	0.06976297E-01	0.02147556E-05	-0.02101159E-07	0.06082149E-11	0.02806422E+06	0.03409834E+02







Source: SNL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

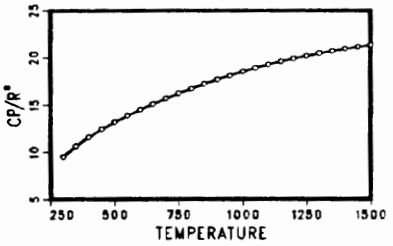
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

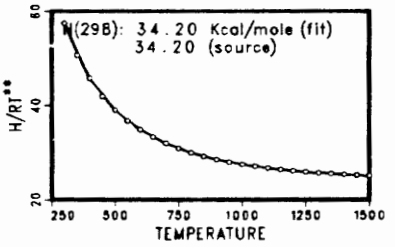
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

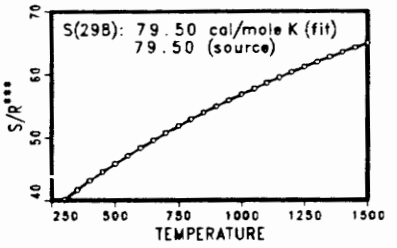
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: ASME2 ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.13903998E+01	0.02923331E+00	0.06598870E-04	-0.05620559E-06	0.04130367E-09	0.15533022E+05	0.02349980E+03
0600-1500K	0.05981395E+02	0.15212837E-01	0.06993355E-05	-0.04721619E-07	0.13699115E-11	0.14679847E+05	0.11927411E+01





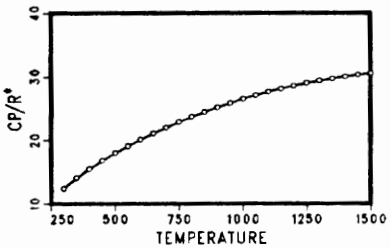


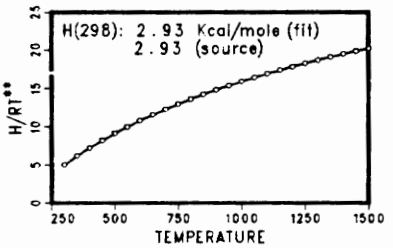
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

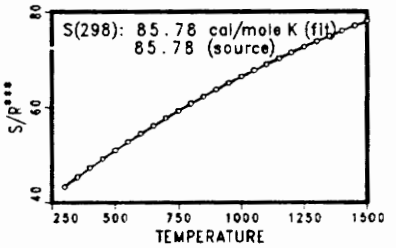
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: ASME3 ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.02667388E+01	0.04253171E+00	0.11651064E-04	-0.07914706E-06	0.05603126E-09	-0.04685539E+04	0.02904590E+03
0600-1500K	0.06347764E+02	0.02466454E+00	0.11546286E-05	-0.07877435E-07	0.02202225E-10	-0.16173225E+04	-0.06316786E+01





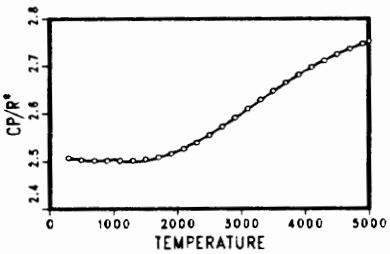


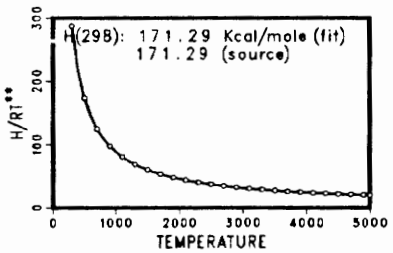
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

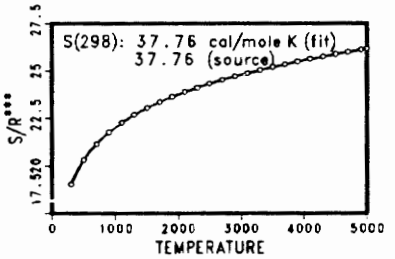
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C CARBON, MONATOMIC GAS As of: 12/10/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02498584E+02	0.08085776E-03	-0.02697697E-05	0.03040729E-08	-0.11066518E-12	0.08545878E+06	0.04753459E+02
1000-5000K	0.02602087E+02	-0.01787081E-02	0.09087041E-06	-0.11499333E-10	0.03310844E-14	0.08542154E+06	0.04195177E+02







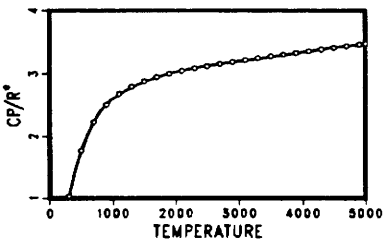
Source: SNLL FIT TO JANAF TABLES

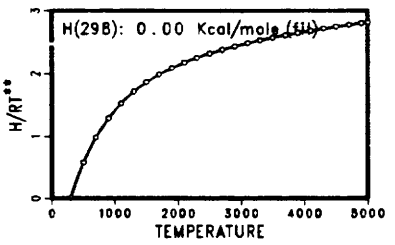
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

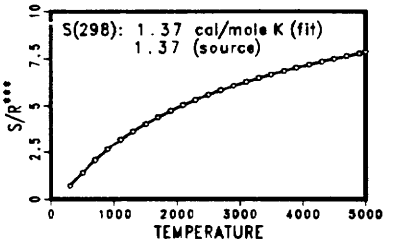
Species: C(S) CARBON (REF ST), GRAPHITE SOLID As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	-0.06705661E+01	0.07181499E-01	-0.05632921E-04	0.02142298E-07	-0.04168562E-11	-0.07339498E+03	0.02601595E+02
1000-5000K	0.14901664E+01	0.16621256E-02	-0.06687204E-05	0.12908796E-09	-0.09205334E-13	-0.07074018E+04	-0.08717785E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

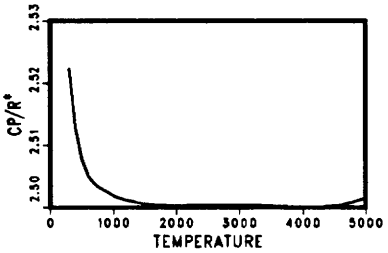
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

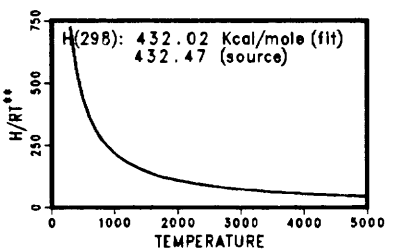
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

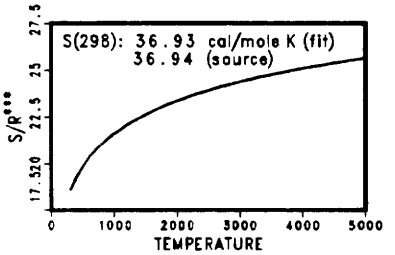
Species: C+ CARBON, UNIPOSITIVE ION GAS As of: 12/01/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02595384E+02	-0.04068664E-02	0.06892366E-05	-0.05266488E-08	0.15083378E-12	0.02166628E+07	0.03895729E+02
1000-5000K	0.02511827E+02	-0.01735978E-03	0.09504267E-07	-0.02218851E-10	0.01862189E-14	0.02166772E+07	0.04286130E+02







Source: NASA FIT TO NASA LEWIS DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

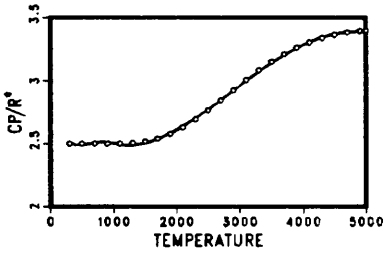
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

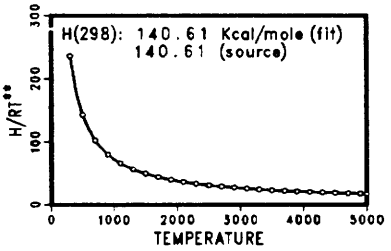
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

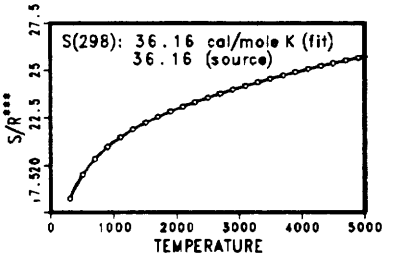
Species: C- CARBON, UNINEGATIVE ION GAS As of: 12/16/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02783902E+02	-0.01774287E-01	0.03696760E-04	-0.03066693E-07	0.08637622E-11	0.06998511E+06	0.02726281E+02
1000-5000K	0.02990221E+02	-0.09184596E-02	0.05055560E-05	-0.07703410E-09	0.03163271E-13	0.06983931E+06	0.12594533E+01







Source: SNLL FIT TO JANAF TABLES

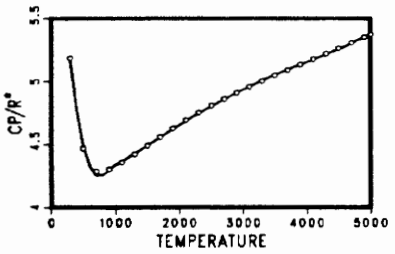
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

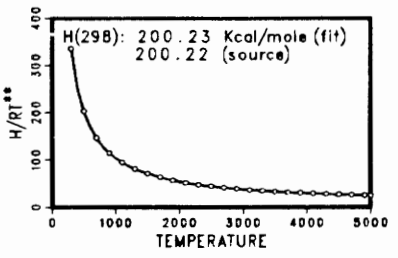
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

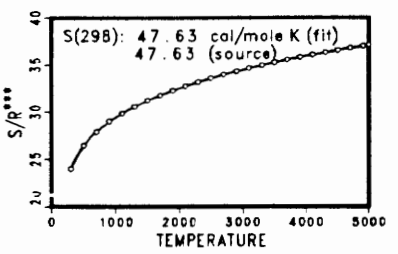
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C2 CARBON, DIATOMIC GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.06996045E+02	-0.07400601E-01	0.03234703E-04	0.04802535E-07	-0.03295917E-10	0.09897487E+06	-0.13862268E+02
1000-5000K	0.04135978E+02	0.06531618E-03	0.01837099E-05	-0.05295085E-09	0.04712137E-13	0.09967272E+06	0.07472923E+01







Source: SNLL FIT TO JANAF TABLES

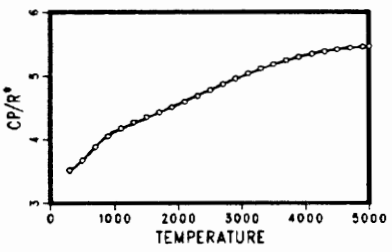
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

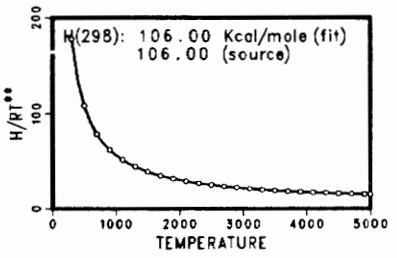
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

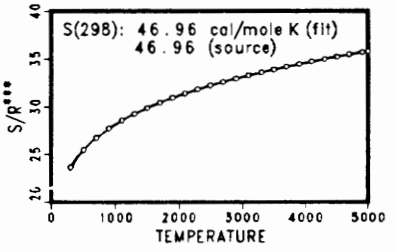
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C2- DIMERIC CARBON, UNINEGATIVE ION GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03468011E+02	-0.02352874E-02	0.12439123E-05	0.04705960E-08	-0.08164274E-11	0.05231215E+06	0.03886699E+02
1000-5000K	0.03796891E+02	0.02530049E-02	0.09709118E-06	-0.16148038E-10	-0.03212893E-15	0.05207981E+06	0.16581468E+01







Source: SNLL FIT TO JANAF TABLES

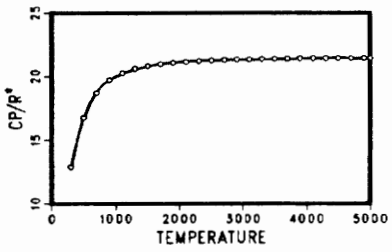
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

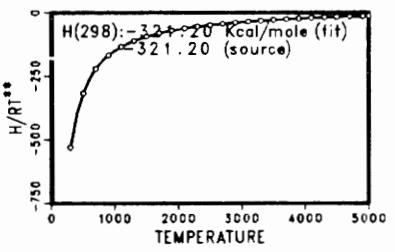
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

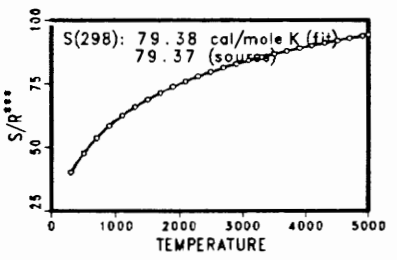
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C2F6 HEXAFLUOROETHANE GAS As of: 8/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03577448E+02	0.03913670E+00	-0.02714862E-03	0.04348459E-08	0.04007135E-10	-0.16421741E+06	0.09098384E+02
1000-5000K	0.16020573E+02	0.06273007E-01	-0.02797778E-04	0.05517547E-08	-0.04004651E-12	-0.16756543E+06	-0.05519459E+03







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

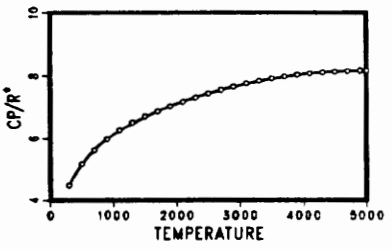
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

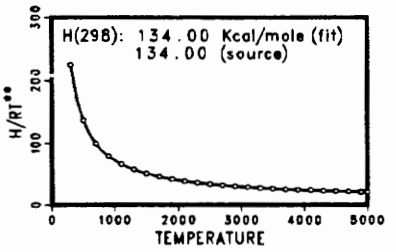
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

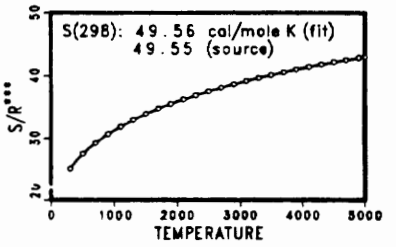
Species: C2H CCH RADICAL GAS As of: 2/03/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03050667E+02	0.06051674E-01	-0.04956634E-04	0.02804159E-07	-0.08193332E-11	0.06630011E+06	0.05954361E+02
1000-5000K	0.04427688E+02	0.02216268E-01	-0.06048952E-05	0.09882517E-09	-0.07351179E-13	0.06590415E+06	-0.11994418E+01







Source: SNLL FIT TO JANAF TABLES WITH H298=134 PER MILLER

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

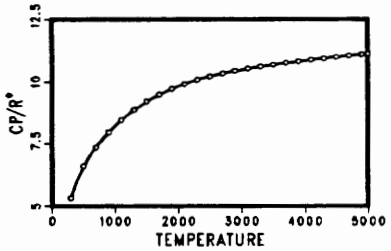
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

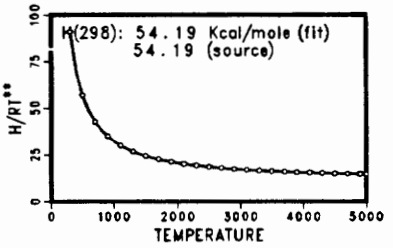
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

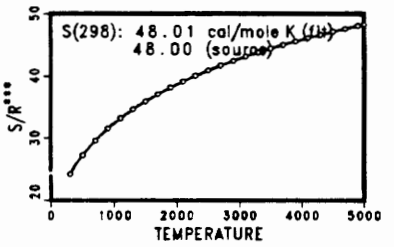
Species: C2H2 ACETYLENE GAS As of: 12/13/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02013562E+02	0.15190446E-01	-0.16163189E-04	0.09078992E-07	-0.01912746E-10	0.02612444E+06	0.08805378E+02
1000-5000K	0.04436770E+02	0.05376039E-01	-0.01912816E-04	0.03286379E-08	-0.02156709E-12	0.02566766E+06	-0.02800338E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

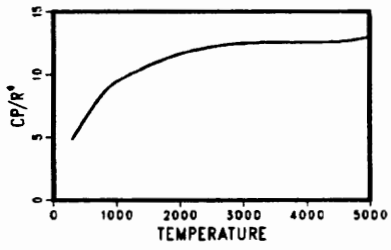
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

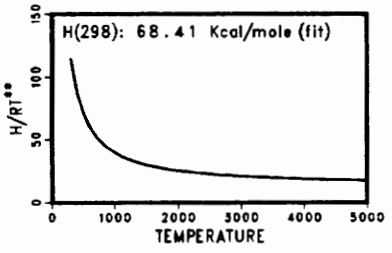
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

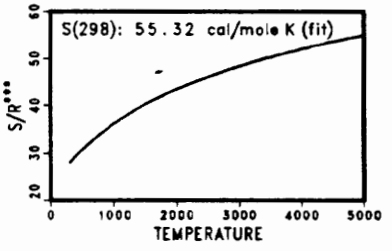
Species: C2H3 VINYL-RAD GAS As of: 1/27/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02459276E+02	0.07371476E-01	0.02109872E-04	-0.13216421E-08	-0.11847838E-11	0.03335225E+06	0.11556202E+02
1000-5000K	0.05933468E+02	0.04017745E-01	-0.03966739E-05	-0.14412666E-09	0.02378643E-12	0.03185434E+06	-0.08530313E+02







Source: RECALC. OF BURCAT FIT (TECHNION), H298=68.4 PER MILLER

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

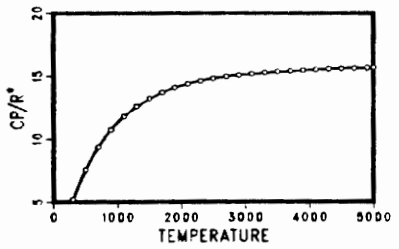
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

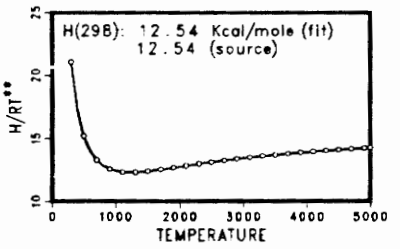
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

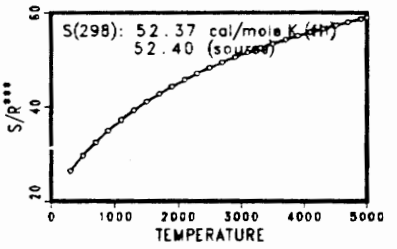
Species: C2H4 ETHYLENE GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	-0.08614880E+01	0.02796162E+00	-0.03388677E-03	0.02785152E-06	-0.09737879E-10	0.05573046E+05	0.02421148E+03
1000-5000K	0.03528418E+02	0.11485185E-01	-0.04418385E-04	0.07844600E-08	-0.05266848E-12	0.04428288E+05	0.02230389E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

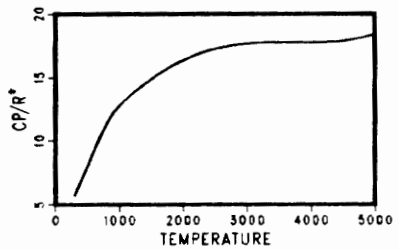
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

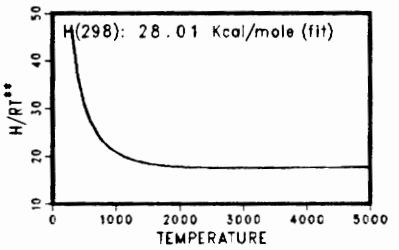
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

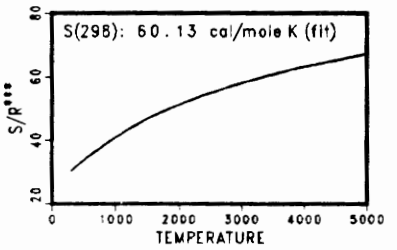
Species: C2H5 ETHYL RAD GAS As of: 1/23/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02690701E+02	0.08719133E-01	0.04419838E-04	0.09338703E-08	-0.03927773E-10	0.12870404E+05	0.12138195E+02
1000-5000K	0.07190480E+02	0.06484077E-01	-0.06428064E-05	-0.02347879E-08	0.03880877E-12	0.10674549E+05	-0.14780892E+02







Source: RECALC. OF BURCAT FIT (TSIV TABLES), H298=28 PER MILLER

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

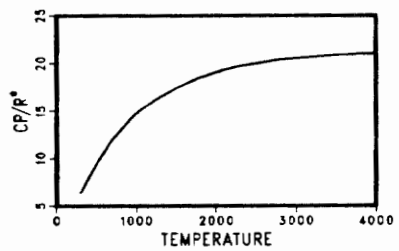
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

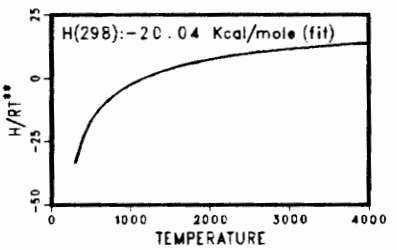
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

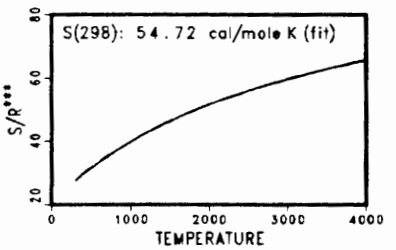
Species: C2H6 ETHANE GAS As of: 12/16/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.14625388E+01	0.15494667E-01	0.05780507E-04	-0.12578319E-07	0.04586267E-10	-0.11239176E+05	0.14432295E+02
1000-4000K	0.04825938E+02	0.13840429E-01	-0.04557258E-04	0.06724967E-08	-0.03598161E-12	-0.12717793E+05	-0.05239506E+02







Source: BURCAT (TECHNION REPORTS)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

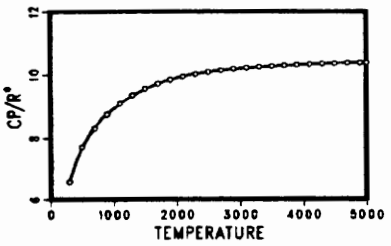
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

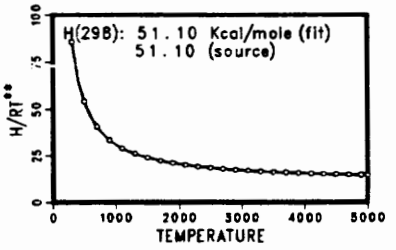
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

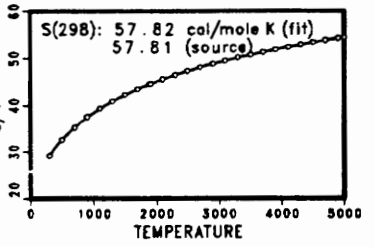
Species: C2HCL CHLOROACETYLENE GAS As of: 11/29/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03618443E+02	0.13319791E-01	-0.13218222E-04	0.06092023E-07	-0.08879026E-11	0.02415385E+06	0.05050645E+02
1000-5000K	0.06295372E+02	0.03883113E-01	-0.15060494E-05	0.02700003E-08	-0.01830213E-12	0.02357278E+06	-0.08137063E+02







Source: SNLL FIT TO JANNAF DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

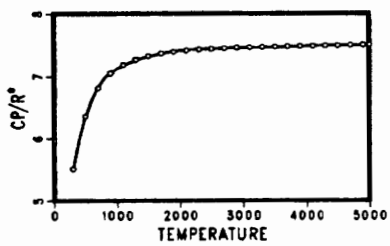
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

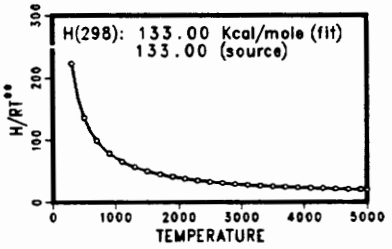
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

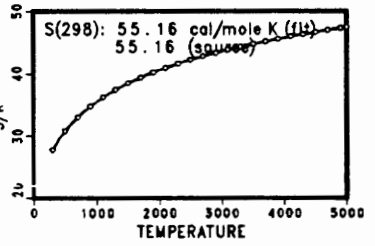
Species: C2N CNC RADICAL GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03498544E+02	0.08554433E-01	-0.06288697E-04	0.08638478E-08	0.04915996E-11	0.06556611E+06	0.05548374E+02
1000-5000K	0.06151561E+02	0.15116498E-02	-0.06629362E-05	0.12861485E-09	-0.09160830E-13	0.06484318E+06	-0.08177850E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

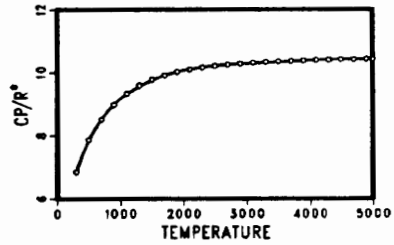
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

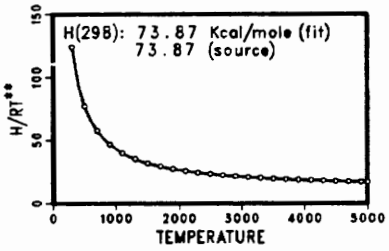
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

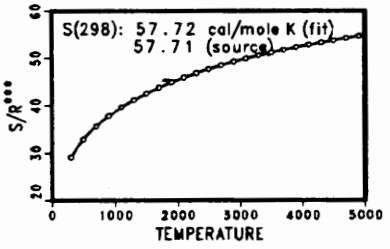
Species: C2N2 CYANOGEN GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04265459E+02	0.11922569E-01	-0.13420142E-04	0.09192297E-07	-0.02778941E-10	0.03547887E+06	0.01713212E+02
1000-5000K	0.06548002E+02	0.03984707E-01	-0.16342164E-05	0.03038596E-08	-0.02111069E-12	0.03490716E+06	-0.09735790E+02







Source: SNLL FIT TO JANAF TABLES

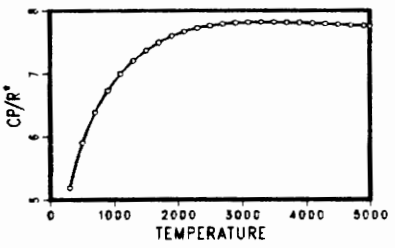
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

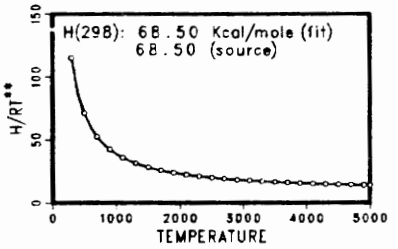
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

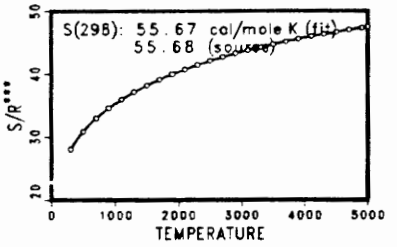
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C2O CCO RADICAL GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03368850E+02	0.08241803E-01	-0.08765145E-04	0.05569262E-07	-0.15400086E-11	0.03317081E+06	0.06713314E+02
1000-5000K	0.04849809E+02	0.02947585E-01	-0.10907286E-05	0.01792562E-08	-0.11157585E-13	0.03282055E+06	-0.06453225E+01







Source: SNLL FIT TO JANAF TABLES

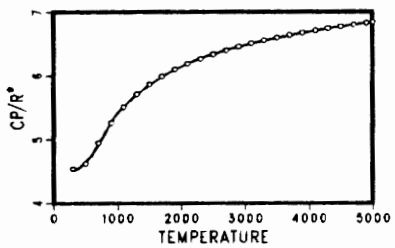
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

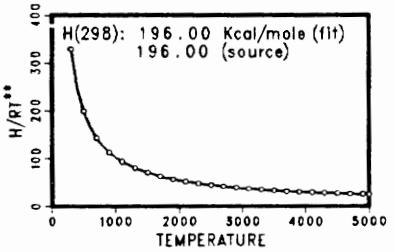
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

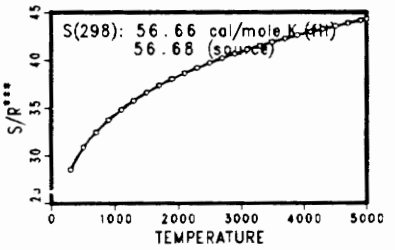
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C3 CARBON, TRIATOMIC GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04345527E+02	0.12644661E-02	-0.04652557E-04	0.08695855E-07	-0.04243535E-10	0.09731403E+06	0.03519437E+02
1000-5000K	0.03803709E+02	0.02253566E-01	-0.07704534E-05	0.13162939E-09	-0.08694264E-13	0.09736135E+06	0.06128062E+02







Source: SNLL FIT TO JANAF TABLES

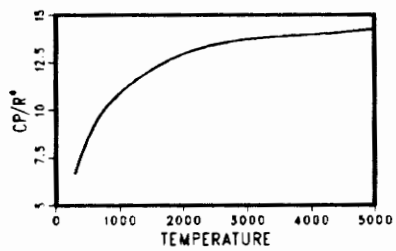
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

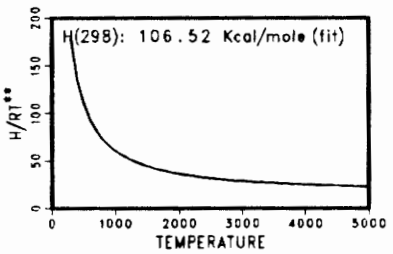
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

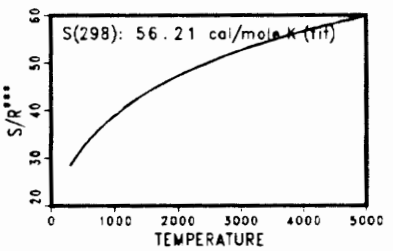
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C3H2 C3H2 RAD GAS As of: 12/16/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02691077E+02	0.14803664E-01	-0.03250551E-04	-0.08644363E-07	0.05284877E-10	0.05219072E+06	0.08757391E+02
1000-5000K	0.06530853E+02	0.05870316E-01	-0.01720776E-04	0.02127498E-08	-0.08291910E-13	0.05115213E+06	-0.11227278E+02







Source: BURCAT (LSU CALCULATIONS)

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

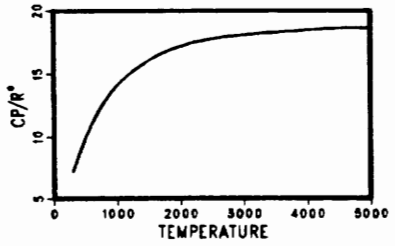
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

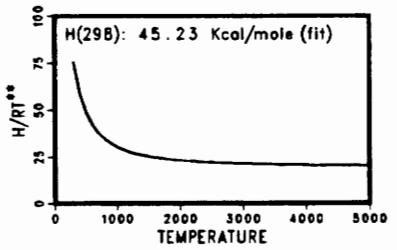
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

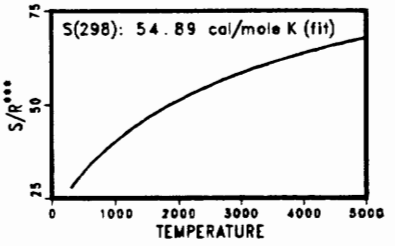
Species: C3H4 ALLENE GAS As of: 4/06/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	-0.02131968E+01	0.03358713E+00	-0.03804870E-03	0.02745838E-06	-0.08690044E-10	0.02162048E+06	0.02029392E+03
1000-5000K	0.05729144E+02	0.12368045E-01	-0.04805626E-04	0.08601364E-08	-0.05812802E-12	0.02012984E+06	-0.09448668E+02







Source: SNLL FIT TO BURCAT VIBRATIONAL FREQUENCIES
Comments: (ERROR IN BURCAT COEFFICIENTS)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

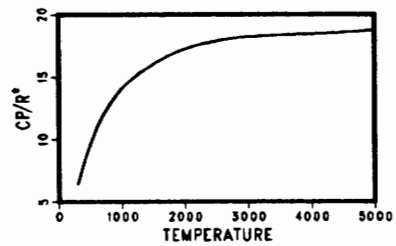
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

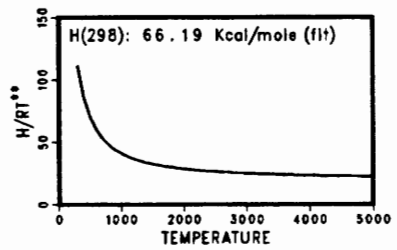
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

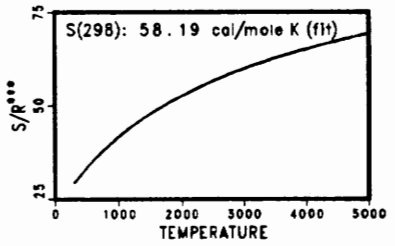
Species: C3H4C CYCLOPROPENE GAS As of: 12/16/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	-0.02462104E+00	0.02319721E+00	-0.01847435E-04	-0.15927594E-07	0.08684615E-10	0.03233413E+06	0.02271659E+03
1000-5000K	0.06699993E+02	0.10357372E-01	-0.03455116E-04	0.05065295E-08	-0.02668227E-12	0.03019905E+06	-0.13391933E+02







Source: BURCAT (TECHNION REPORTS)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

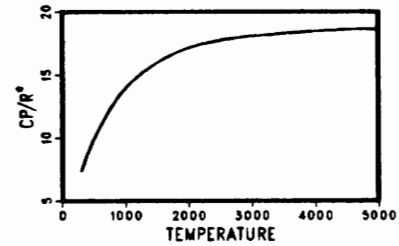
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

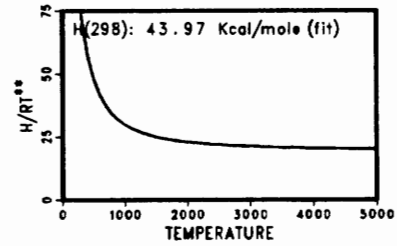
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

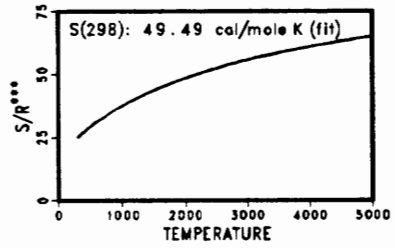
Species: C3H4P PROPYNE GAS As of: 4/06/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.06271447E+01	0.03116179E+00	-0.03747663E-03	0.02964117E-06	-0.09987381E-10	0.02083492E+06	0.13468796E+02
1000-5000K	0.05511034E+02	0.12469562E-01	-0.04814164E-04	0.08573770E-08	-0.05771561E-12	0.01961967E+06	-0.10794748E+02







Source: SNLL FIT TO BURCAT VIBRATIONAL FREQUENCIES
Comments: (ERROR IN BURCAT COEFFICIENTS)

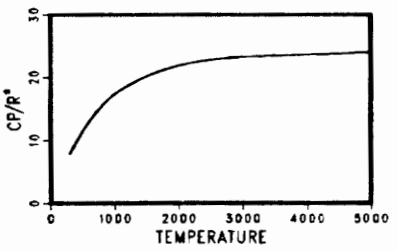
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

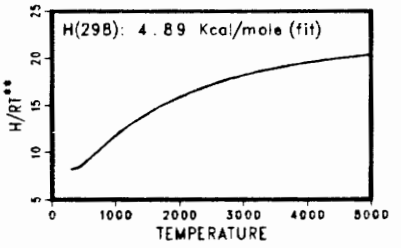
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

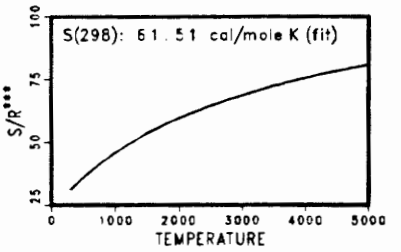
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C3H6 PROPYLENE GAS As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.14933071E+01	0.02092517E+00	0.04486794E-04	-0.16689121E-07	0.07158146E-10	0.10748264E+04	0.16145340E+02
1000-5000K	0.06732257E+02	0.14908336E-01	-0.04949899E-04	0.07212022E-08	-0.03766204E-12	-0.09235703E+04	-0.13313348E+02







Source: BURCAT (TECHNION REPORTS)

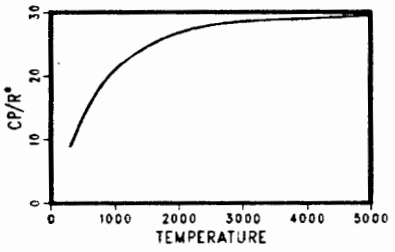
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

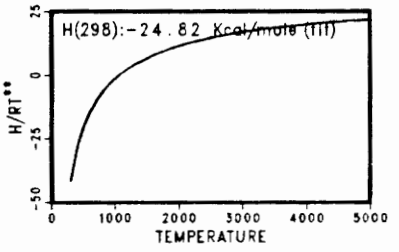
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

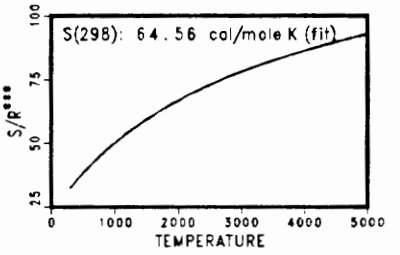
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C3H8 PROPANE GAS As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.08969208E+01	0.02668986E+00	0.05431425E-04	-0.02126000E-06	0.09243330E-10	-0.13954918E+05	0.01935533E+03
1000-5000K	0.07525217E+02	0.01889034E+00	-0.06283924E-04	0.09179373E-08	-0.04812410E-12	-0.16464548E+05	-0.01784390E+03







Source: BURCAT (NASA LEWIS TABLES)

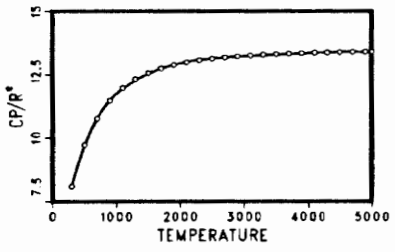
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

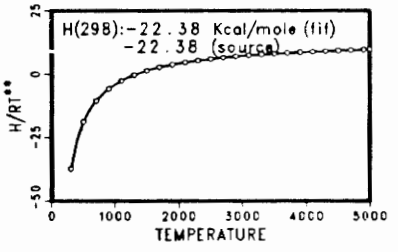
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

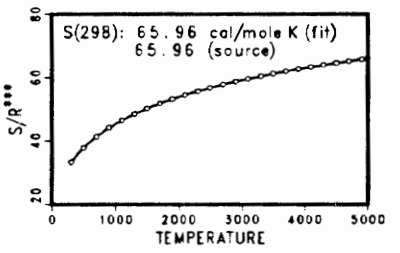
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C3O2 CARBON SUBOXIDE GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04018127E+02	0.01836660E+00	-0.01907148E-03	0.11855871E-07	-0.03418747E-10	-0.13128236E+05	0.05582083E+02
1000-5000K	0.08098897E+02	0.05560039E-01	-0.02312264E-04	0.04340709E-08	-0.03036387E-12	-0.14214353E+05	-0.15219745E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

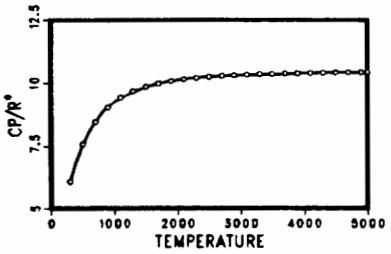
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

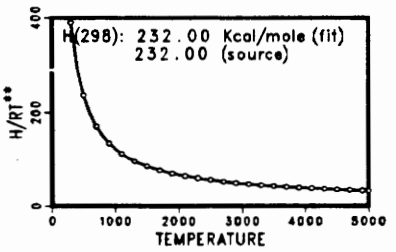
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

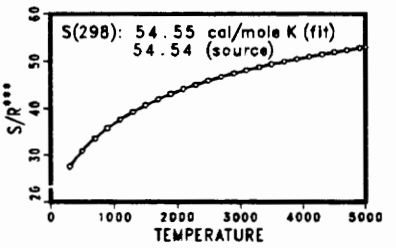
Species: C4 CARBON, TETRATOMIC GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02343028E+02	0.16429811E-01	-0.15279858E-04	0.07343826E-07	-0.15822743E-11	0.11545384E+06	0.09826204E+02
1000-5000K	0.06500180E+02	0.04228632E-01	-0.01790717E-04	0.03404812E-08	-0.02403978E-12	0.11434008E+06	-0.11488894E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

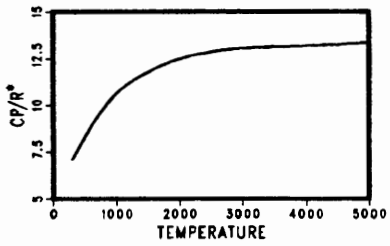
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

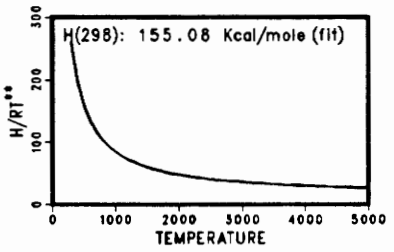
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

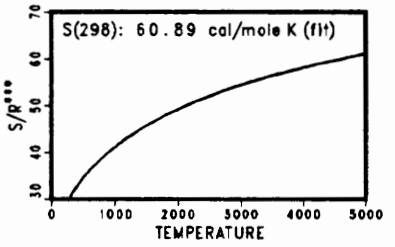
Species: C4H C4H RAD GAS As of: 12/16/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.05023247E+02	0.07092375E-01	-0.06073762E-07	-0.02275752E-07	0.08086994E-11	0.07623812E+06	-0.06942594E+00
1000-5000K	0.06242882E+02	0.06193682E-01	-0.02085931E-04	0.03082203E-08	-0.16364826E-13	0.07568019E+06	-0.07210806E+02







Source: BURCAT (TECHNION REPORTS)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

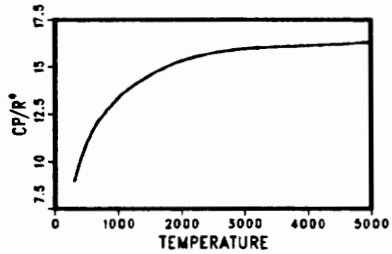
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

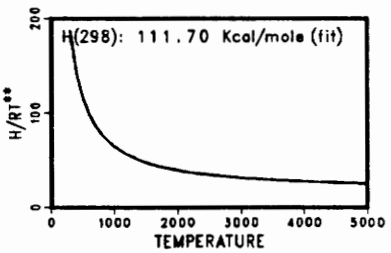
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

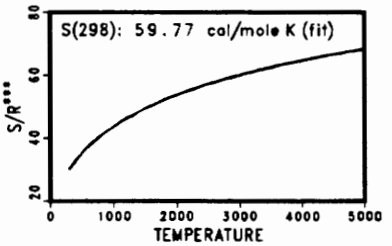
Species: C4H2 BUTADIYNE GAS As of: 12/16/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04005191E+02	0.01981000E+00	-0.09865877E-04	-0.06635158E-07	0.06077413E-10	0.05424065E+06	0.01845736E+02
1000-5000K	0.09031407E+02	0.06047252E-01	-0.01948788E-04	0.02754863E-08	-0.13856080E-13	0.05294735E+06	-0.02385067E+03







Source: BURCAT (LSU CALCULATIONS)

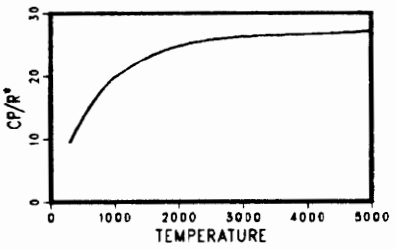
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

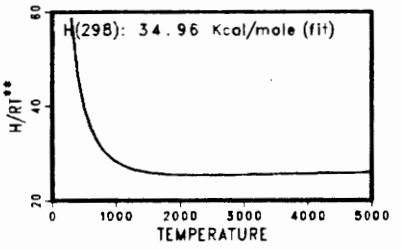
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

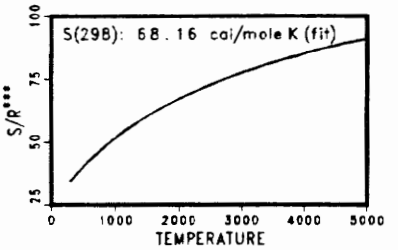
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C4H6 2-BUTAYN (DIMETHYLACETYLENE) GAS As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03197108E+02	0.02025591E+00	0.06510192E-04	-0.16584423E-07	0.06400282E-10	0.15715203E+05	0.09895660E+02
1000-5000K	0.08046583E+02	0.16485251E-01	-0.05522227E-04	0.08123593E-08	-0.04295078E-12	0.13701305E+05	-0.01800457E+03







Source: BURCAT (TECHNION REPORTS)

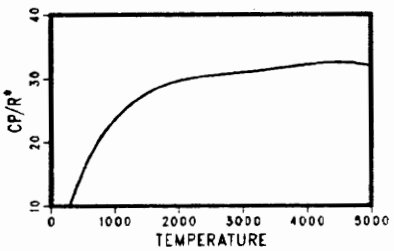
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

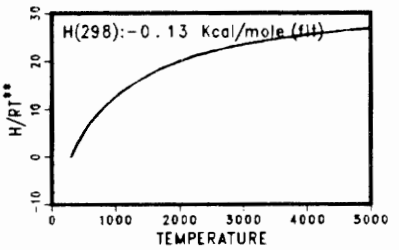
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

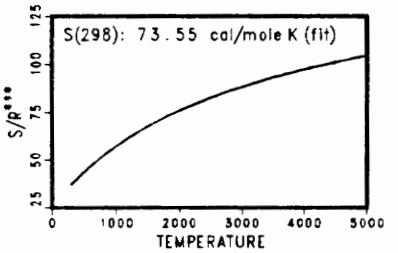
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C4H8 1-BUTENE GAS As of: 12/03/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.11811380E+01	0.03085338E+00	0.05086524E-04	-0.02465488E-06	0.11110192E-10	-0.01790400E+05	0.02106247E+03
1000-5000K	0.02053584E+02	0.03435050E+00	-0.15883196E-04	0.03308966E-07	-0.02536104E-11	-0.02139723E+05	0.15543201E+02







Source: BURCAT (TECHNION REPORTS)

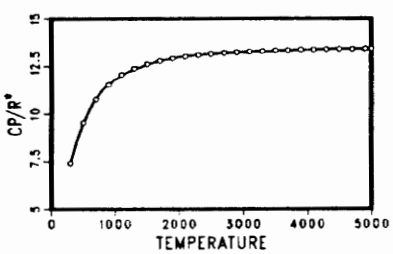
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

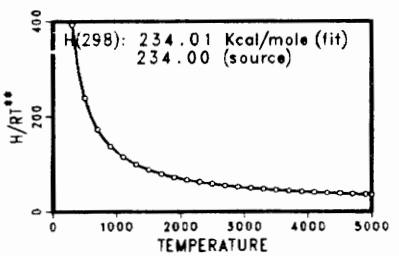
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

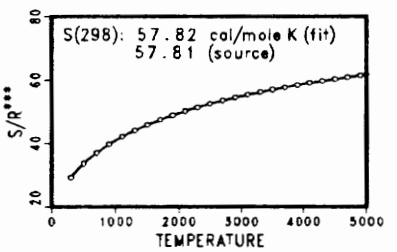
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C5 CARBON, PENTATOMIC GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02115273E+02	0.02326331E+00	-0.02109499E-03	0.09072734E-07	-0.15400926E-11	0.11627381E+06	0.10976027E+02
1000-5000K	0.08078081E+02	0.05743464E-01	-0.02436405E-04	0.04638916E-08	-0.03278909E-12	0.11470216E+06	-0.01953023E+03







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

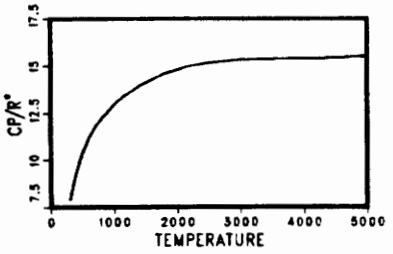
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

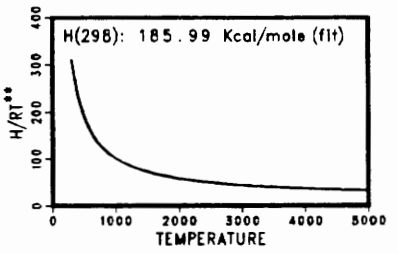
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

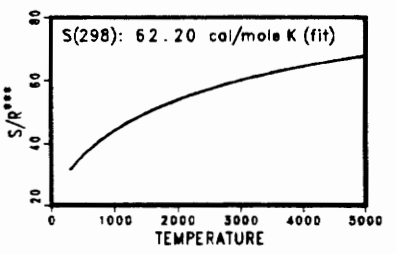
Species: C5H C5H RAD GAS As of: 2/03/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.16348248E+01	0.02509538E+00	-0.12066364E-04	-0.10465110E-07	0.08809988E-10	0.09212488E+06	0.15121937E+02
1000-5000K	0.08695749E+02	0.06054301E-01	-0.02016010E-04	0.02892892E-08	-0.14700996E-13	0.09031069E+06	-0.02101594E+03







Source: BURCAT FIT (TECHNION REPORTS)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

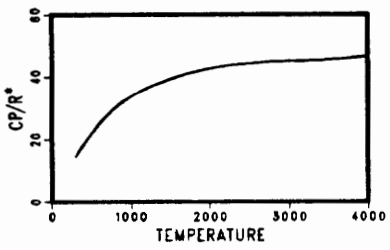
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

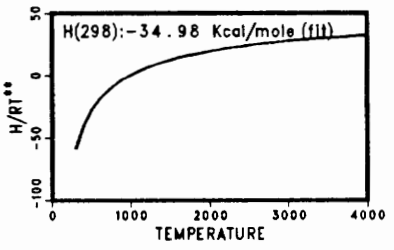
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

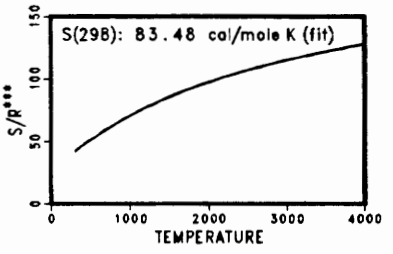
Species: C5H12 N-PENTANE GAS As of: 2/03/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.01877907E+02	0.04121645E+00	0.12532337E-04	-0.03701536E-06	0.15255685E-10	-0.02003815E+06	0.01877256E+03
1000-4000K	0.16677979E+02	0.02114483E+00	-0.03533321E-04	-0.05742202E-08	0.15159483E-12	-0.02553670E+06	-0.06372940E+03







Source: BURCAT FIT (TECHNION REPORTS)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

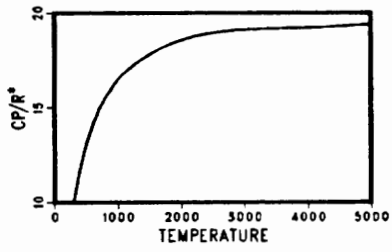
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

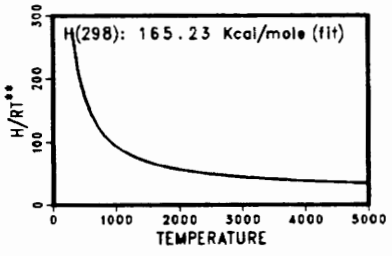
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

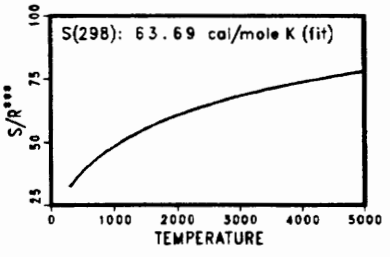
Species: C5H2 C5H2 RAD GAS As of: 2/05/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03062321E+02	0.02709998E+00	-0.10091697E-04	-0.12727451E-07	0.09167219E-10	0.08114969E+06	0.07071078E+02
1000-5000K	0.11329175E+02	0.07424056E-01	-0.02628188E-04	0.04082541E-08	-0.02301332E-12	0.07878706E+06	-0.03617117E+03







Source: BURCAT FIT (TECHNION REPORTS)

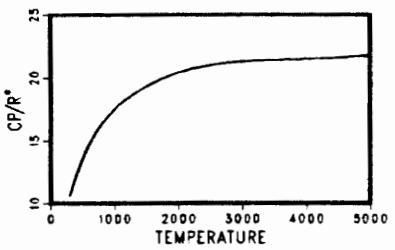
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

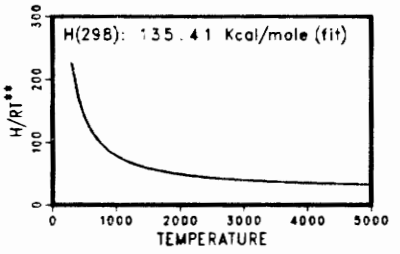
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

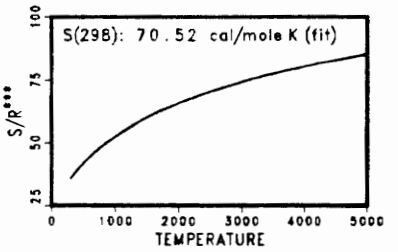
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C5H3 C5H3 RAD GAS As of: 2/03/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04328720E+02	0.02352480E+00	-0.05856723E-04	-0.12154494E-07	0.07726478E-10	0.06588531E+06	0.04173258E+02
1000-5000K	0.10787622E+02	0.09539619E-01	-0.03206744E-04	0.04733323E-08	-0.02512135E-12	0.06392904E+06	-0.03005444E+03







Source: BURCAT (TECHNION REPORTS)

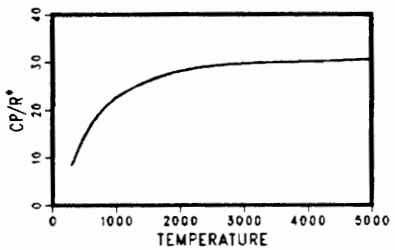
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

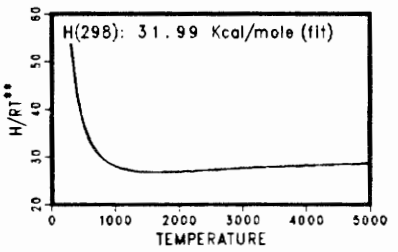
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

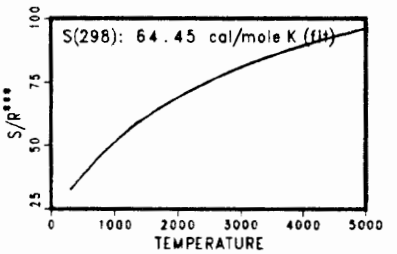
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C5H6 CYCLOPENTADIENE GAS As of: 2/03/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	-0.03196739E+02	0.04081361E+00	0.06816505E-05	-0.03137459E-06	0.15772230E-10	0.15290676E+05	0.03869938E+03
1000-5000K	0.09689815E+02	0.01838262E+00	-0.06264884E-04	0.09393377E-08	-0.05087708E-12	0.11021242E+05	-0.03122908E+03







Source: BURCAT FIT (TECHNION REPORTS)

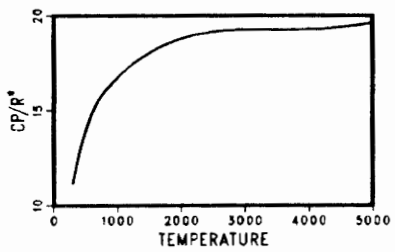
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

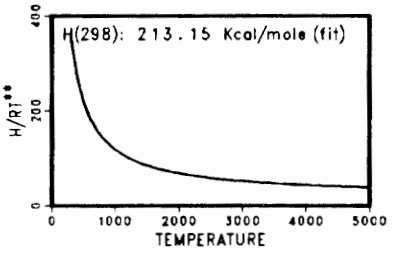
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

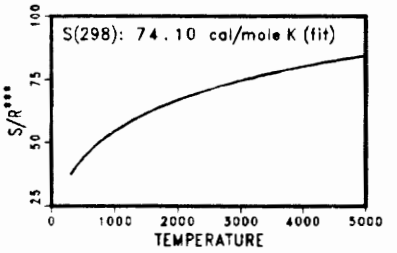
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C6H C6H RAD GAS As of: 12/16/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04769848E+02	0.02457279E+00	-0.07561252E-04	-0.14806908E-07	0.09768053E-10	0.10485231E+06	0.03241530E+02
1000-5000K	0.11587352E+02	0.07295362E-01	-0.02466008E-04	0.03407045E-08	-0.14981855E-13	0.10314481E+06	-0.03172578E+03







Source: BURCAT (LSU CALCULATIONS)

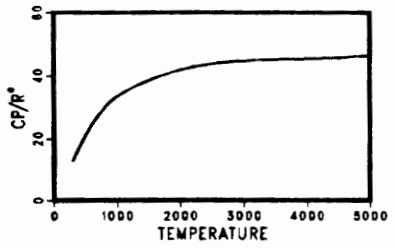
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

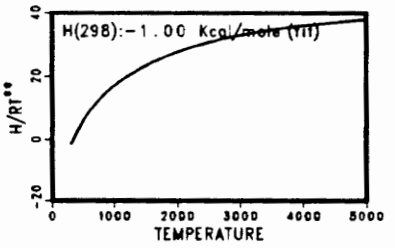
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

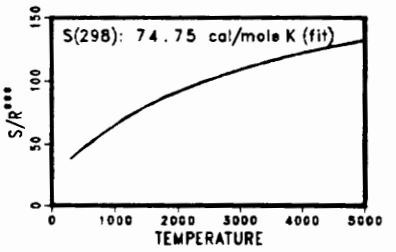
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C6H10 CYCLOHEXENE GAS As of: 2/03/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	-0.13942280E+01	0.04720693E+00	0.11960419E-04	-0.04162895E-06	0.01740335E-09	-0.02217790E+05	0.03129603E+03
1000-5000K	0.15927771E+02	0.02374412E+00	-0.06908672E-04	0.08109777E-08	-0.02683122E-12	-0.08642656E+05	-0.06525186E+03







Source: BURCAT FIT (LSU CALCULATIONS)

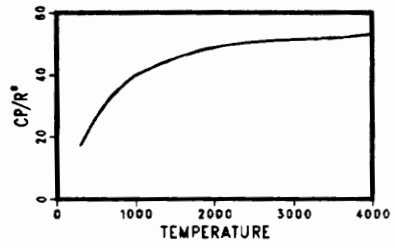
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

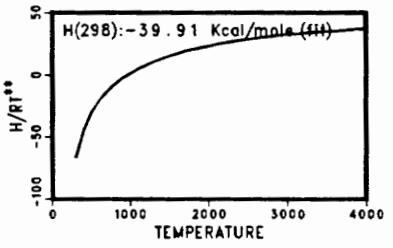
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

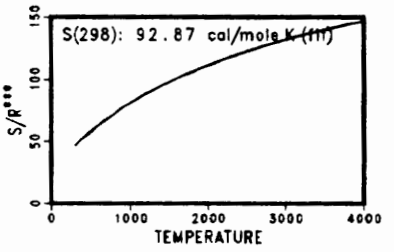
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C6H14 N-HEXANE GAS As of: 2/03/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.01836174E+02	0.05098461E+00	0.12595857E-04	-0.04428362E-06	0.01872237E-09	-0.02292749E+06	0.02088145E+03
1000-4000K	0.02280471E+03	0.02097989E+00	-0.03530674E-04	-0.05466245E-08	0.14789499E-12	-0.03073756E+06	-0.09583162E+03







Source: BURCAT FIT (TECHNION REPORTS)

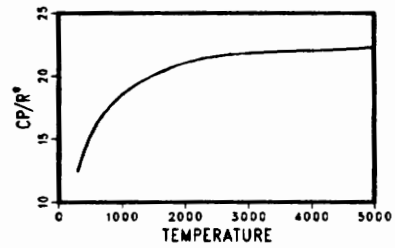
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

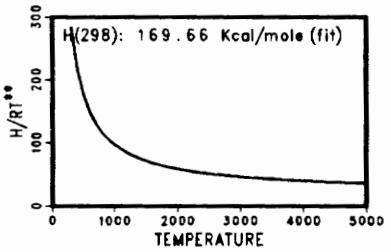
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

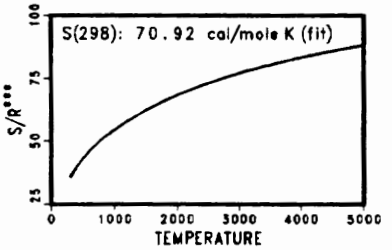
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C6H2 HEXATRIYNE GAS As of: 12/16/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.05751085E+02	0.02636719E+00	-0.11667596E-04	-0.10714498E-07	0.08790297E-10	0.08262012E+06	-0.04335532E+02
1000-5000K	0.12756519E+02	0.08034381E-01	-0.02618215E-04	0.03725060E-08	-0.01878850E-12	0.08075469E+06	-0.04041262E+03







Source: BURCAT (LSU CALCULATIONS)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

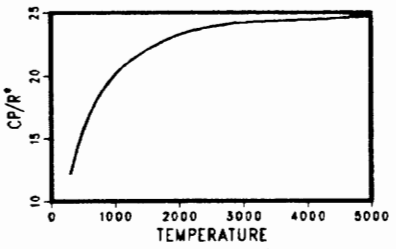
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

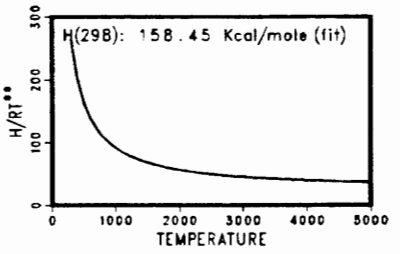
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

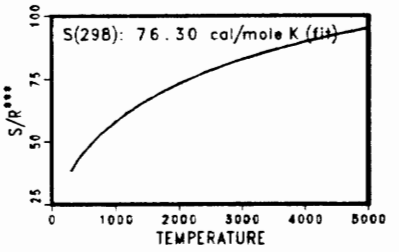
Species: C6H3 C6H3 RAD GAS As of: 2/03/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.05007089E+02	0.02692851E+00	-0.05919865E-04	-0.15272335E-07	0.09408310E-10	0.07713200E+06	0.02225621E+02
1000-5000K	0.12761181E+02	0.10385573E-01	-0.03479192E-04	0.05109733E-08	-0.02690965E-12	0.07477706E+06	-0.03891745E+03







Source: BURCAT FIT (LSU CALCULATIONS)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

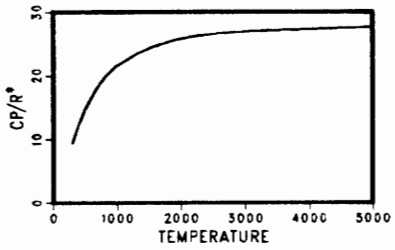
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

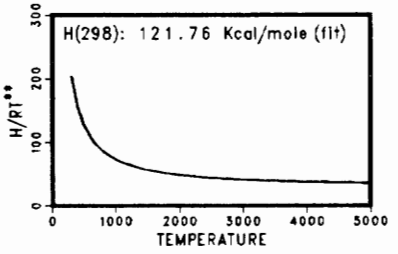
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

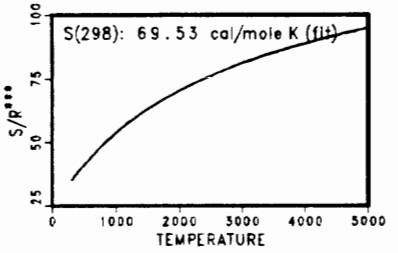
Species: C6H4 BENZYNE GAS As of: 2/03/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	-0.13004846E+01	0.03866476E+00	-0.03643944E-04	-0.02668580E-06	0.14509357E-10	0.06002907E+06	0.03124939E+03
1000-5000K	0.10062741E+02	0.01690304E+00	-0.06473045E-04	0.11240806E-08	-0.07307566E-12	0.05645373E+06	-0.02969310E+03







Source: BURCAT FIT (LSU CALCULATIONS)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

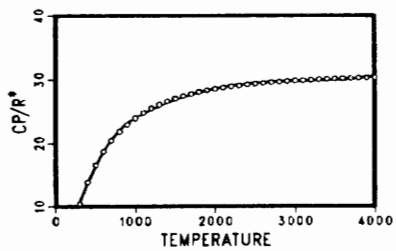
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

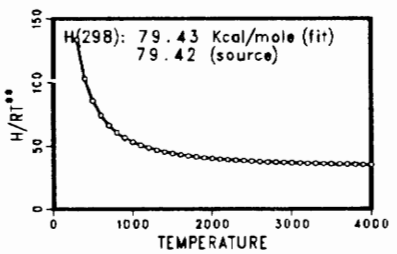
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

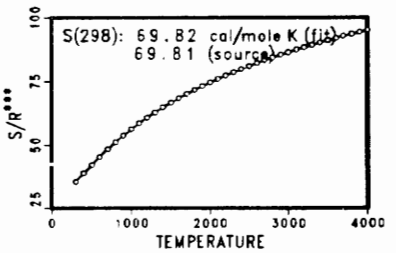
Species: C6H5 PHENYL GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.11435567E+00	0.03627324E+00	0.11582856E-05	-0.02196964E-06	0.08463556E-10	0.03836054E+06	0.02380117E+03
1000-4000K	0.15775887E+02	0.09651109E-01	-0.09429416E-05	-0.05469111E-08	0.10265216E-12	0.03302698E+06	-0.06176280E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

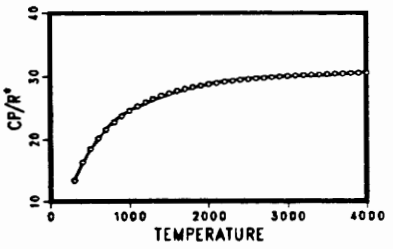
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

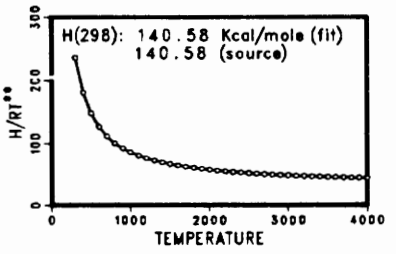
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

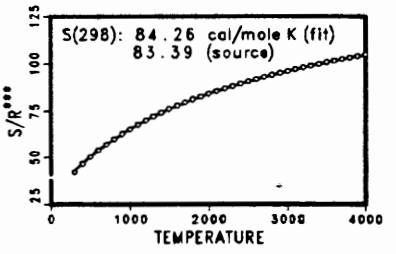
Species: C6H5(L) HCCCHCHCHCH CCCCCIS HCCH CIS 2A' GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04854268E+02	0.03031659E+00	0.01742892E-05	-0.01811010E-06	0.07392511E-10	0.06798733E+06	0.05854934E+02
1000-4000K	0.01721540E+03	0.08621068E-01	-0.08221340E-05	-0.04752164E-08	0.08844086E-12	0.06385819E+06	-0.06139128E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

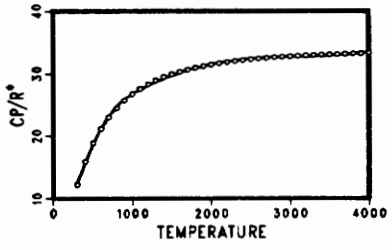
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

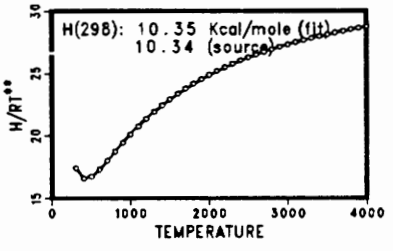
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

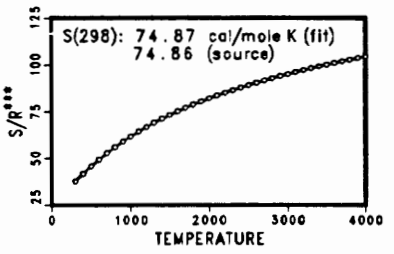
Species: C6H5O PHENOXY GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.11074965E+01	0.03956945E+00	0.08497295E-05	-0.02436311E-06	0.09650659E-10	0.03159672E+05	0.01973496E+03
1000-4000K	0.01822638E+03	0.10039851E-01	-0.09915668E-05	-0.05672804E-08	0.10683716E-12	-0.02620846E+05	-0.07361390E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

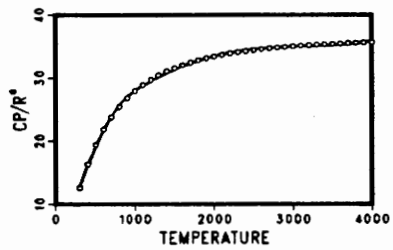
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

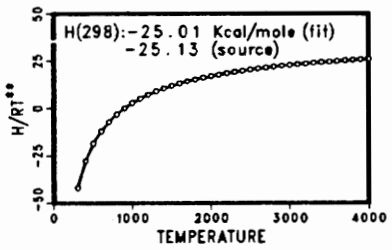
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

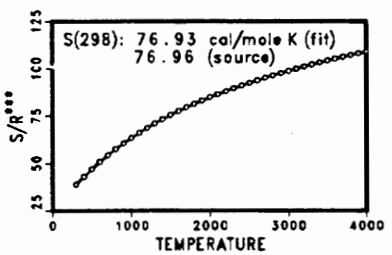
Species: C6H5OH GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.13914556E+01	0.03931957E+00	0.01777096E-04	-0.02277673E-06	0.08309659E-10	-0.14721809E+05	0.01917813E+03
1000-4000K	0.01821632E+03	0.11424269E-01	-0.10966843E-05	-0.06427442E-08	0.11988930E-12	-0.02053664E+06	-0.07304233E+03







Source: SNLL FIT TO BAC-MP4 DATA

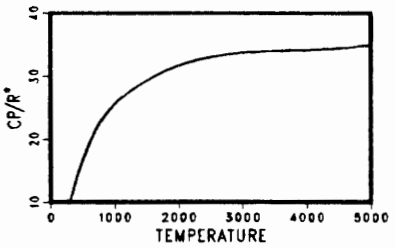
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

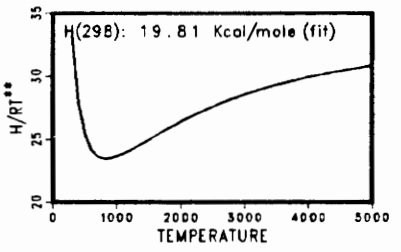
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

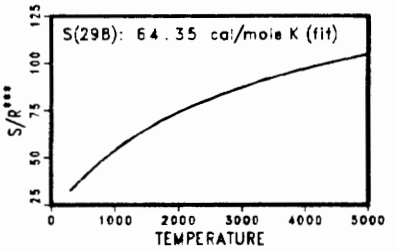
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C6H6 BENZENE GAS As of: 2/03/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	-0.03138012E+02	0.04723103E+00	-0.02962207E-04	-0.03262819E-06	0.01718691E-09	0.08890031E+05	0.03657573E+03
1000-5000K	0.12910740E+02	0.01723296E+00	-0.05024210E-04	0.05893497E-08	-0.01947521E-12	0.03664511E+05	-0.05002699E+03







Source: BURCAT FIT (LSU CALCULATIONS)

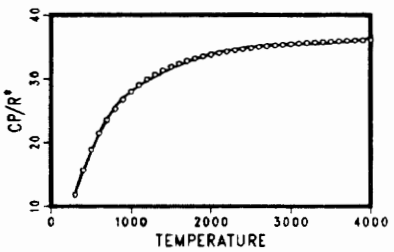
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

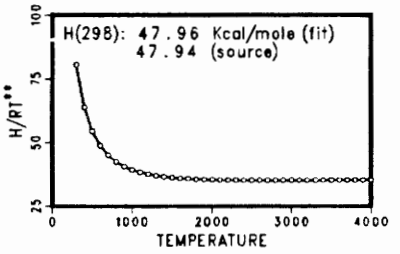
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

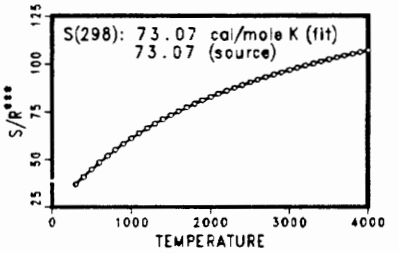
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C6H7 BENZYL 2B1 GAS As of: 8/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04639166E+01	0.03975928E+00	0.02529095E-04	-0.02223792E-06	0.07557053E-10	0.02225169E+06	0.02235387E+03
1000-4000K	0.01755221E+03	0.12270795E-01	-0.11857424E-05	-0.06959661E-08	0.13013259E-12	0.16245813E+05	-0.07166588E+03







Source: SNLL FIT TO BAC-MP4 DATA

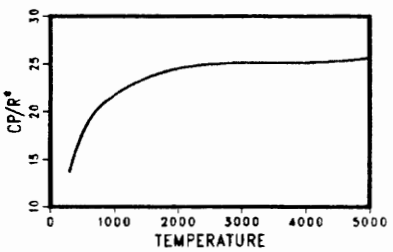
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

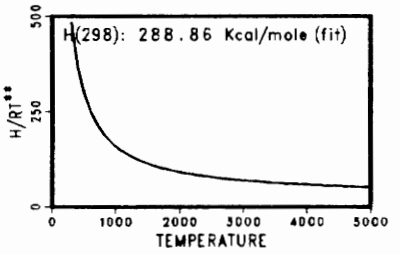
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

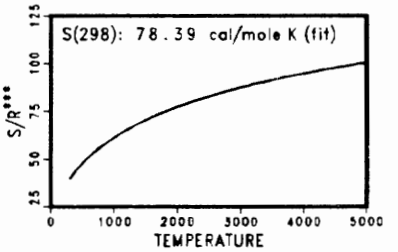
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: C8H C8H RAD GAS As of: 12/16/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04489507E+02	0.03521521E+00	-0.10193898E-04	-0.02197024E-06	0.14214164E-10	0.14259919E+06	0.03996225E+02
1000-5000K	0.14749907E+02	0.09931501E-01	-0.03374841E-04	0.04687592E-08	-0.02073536E-12	0.13994481E+06	-0.04892689E+03







Source: BURCAT (LSU CALCULATIONS)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

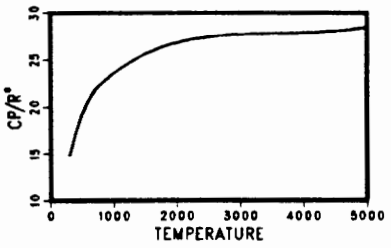
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

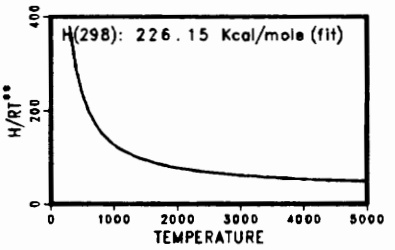
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

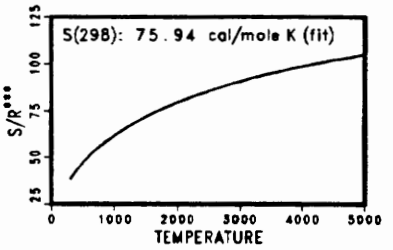
Species: C8H2 OCTATETRAYNE GAS As of: 12/16/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04630427E+02	0.03937080E+00	-0.11480348E-04	-0.02562213E-06	0.16707913E-10	0.11082850E+06	0.08077425E+01
1000-5000K	0.15680213E+02	0.11154614E-01	-0.03724372E-04	0.05197891E-08	-0.02375550E-12	0.10811225E+06	-0.05571437E+03







Source: BURCAT (LSU CALCULATIONS)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

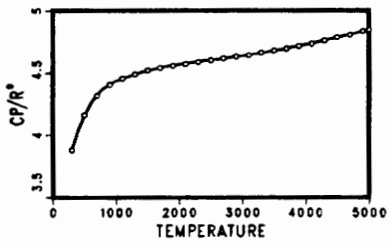
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

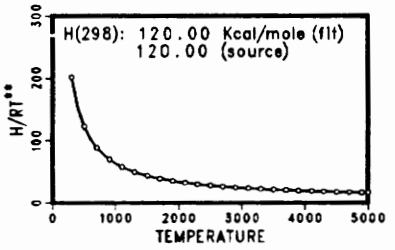
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

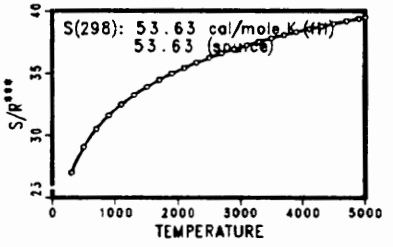
Species: CCL CARBON MONOCHLORIDE GAS As of: 11/29/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03188782E+02	0.02965197E-01	-0.02305370E-04	0.04866913E-08	0.09990141E-12	0.05932937E+06	0.08037628E+02
1000-5000K	0.04072804E+02	0.05508787E-02	-0.02319334E-05	0.04669038E-09	-0.03236856E-13	0.05909198E+06	0.03481073E+02







Source: SNLL FIT TO JANNAF DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

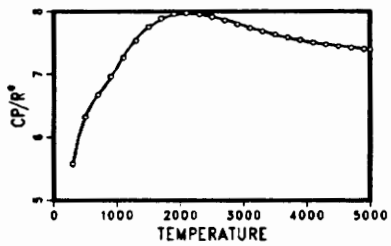
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

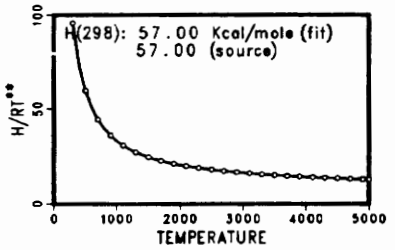
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

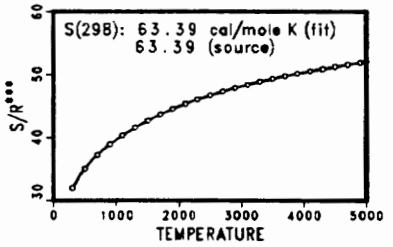
Species: CCL2 CARBON DICHLORIDE GAS As of: 11/29/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02651916E+02	0.15169552E-01	-0.02230162E-03	0.15041039E-07	-0.03452951E-10	0.02739027E+06	0.13136703E+02
1000-5000K	0.03501741E+02	0.05749397E-01	-0.02589721E-04	0.04783950E-08	-0.03188271E-12	0.02763633E+06	0.10829469E+02







Source: SNLL FIT TO JANNAF DATA

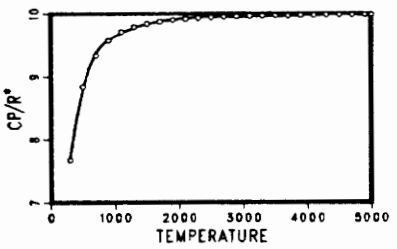
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

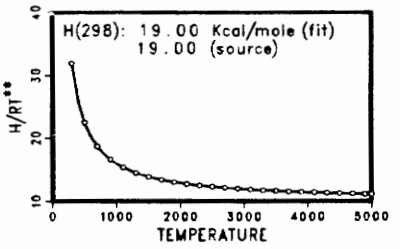
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

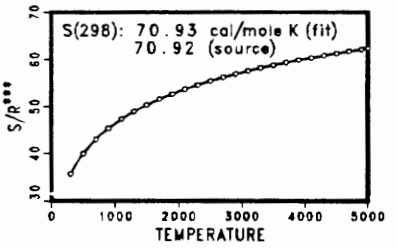
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CCL3 TRICHLOROMETHYL GAS As of: 11/29/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04866162E+02	0.11903691E-01	-0.07849049E-04	-0.14484371E-08	0.02169760E-10	0.07655364E+05	0.04781636E+02
1000-5000K	0.08639372E+02	0.15880909E-02	-0.07176410E-05	0.14271238E-09	-0.10407368E-13	0.06701065E+05	-0.14518221E+02







Source: SNLL FIT TO JANNAF DATA

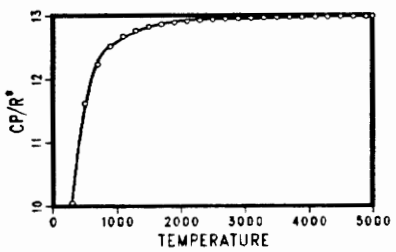
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

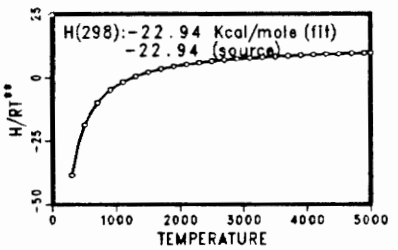
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

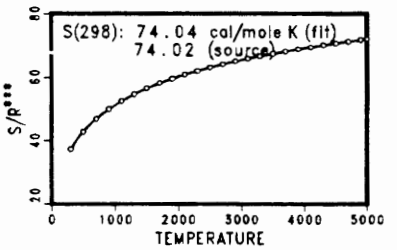
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CCL4 CARBON TETRACHLORIDE GAS As of: 11/29/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.06286815E+02	0.15997799E-01	-0.10203526E-04	-0.03043311E-07	0.03546287E-10	-0.14032573E+05	-0.02850812E+02
1000-5000K	0.11369968E+02	0.01933276E-01	-0.08832003E-05	0.01770067E-08	-0.12982896E-13	-0.15283466E+05	-0.02874324E+03







Source: SNLL FIT TO JANNAF DATA

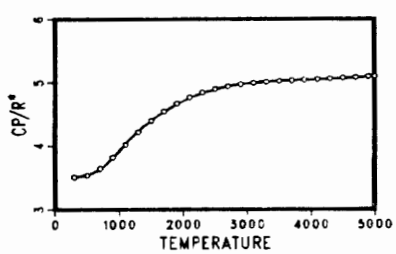
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

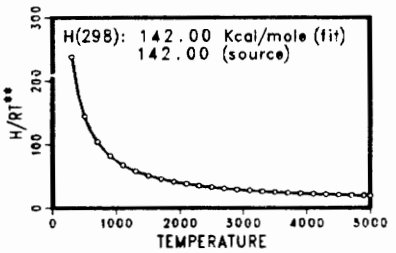
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

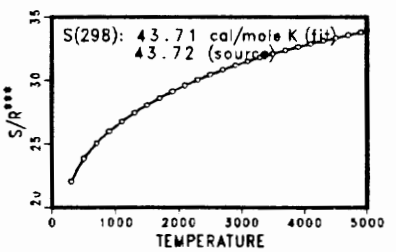
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CH METHLYLIDYNE GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03200202E+02	0.02072875E-01	-0.05134431E-04	0.05733890E-07	-0.01955533E-10	0.07045259E+06	0.03331587E+02
1000-5000K	0.02196223E+02	0.02340381E-01	-0.07058201E-05	0.09007582E-09	-0.03855040E-13	0.07086723E+06	0.09178373E+02







Source: SNLL FIT TO JANAF TABLES

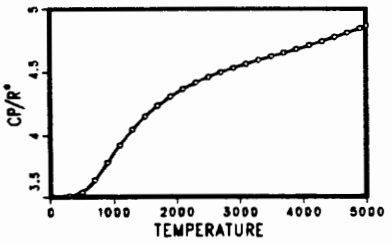
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

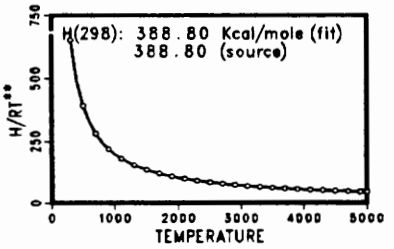
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

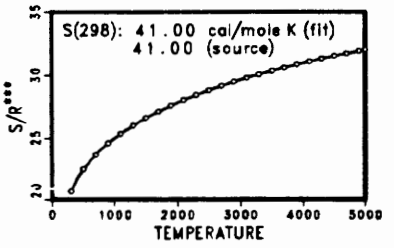
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CH+ METHLYLIDYNE, UNIPOSITIVE ION GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03327207E+02	0.13470505E-02	-0.03895861E-04	0.05129390E-07	-0.02054575E-10	0.01946452E+07	0.14084738E+01
1000-5000K	0.02753358E+02	0.15528998E-02	-0.05368453E-05	0.08921772E-09	-0.05416801E-13	0.01948467E+07	0.04654892E+02







Source: SNLL FIT TO JANAF TABLES

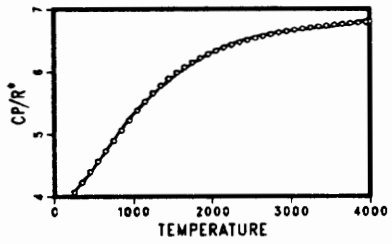
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

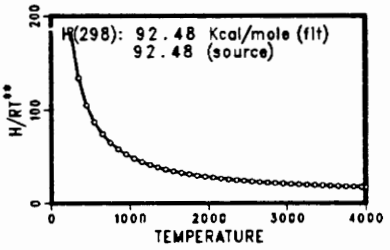
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

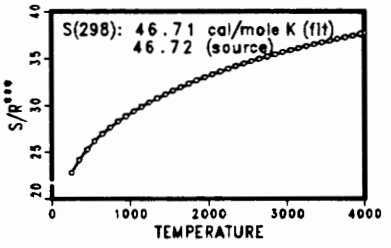
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CH2 METHYLENE, TRIPLET GAS As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0250-1000K	0.03762237E+02	0.11598191E-02	0.02489585E-05	0.08800836E-08	-0.07332435E-11	0.04536790E+06	0.01712577E+02
1000-4000K	0.03636407E+02	0.01933056E-01	-0.01687016E-05	-0.10098994E-09	0.01808255E-12	0.04534134E+06	0.02156560E+02







Source: SNLL FIT TO BAC-MP4 DATA

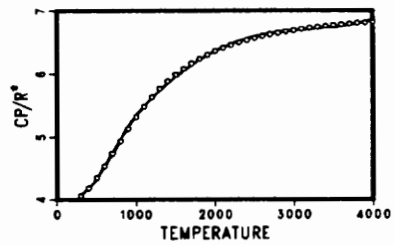
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

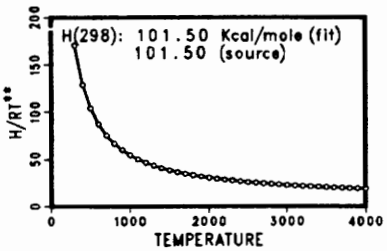
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

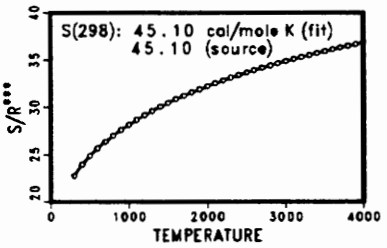
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CH2(S) METHYLENE, SINGLET GAS As of: 3/12/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03971265E+02	-0.01699088E-02	0.10253689E-05	0.02492550E-07	-0.01981266E-10	0.04989367E+06	0.05753207E+00
1000-4000K	0.03552888E+02	0.02066788E-01	-0.01914116E-05	-0.11046733E-09	0.02021349E-12	0.04984975E+06	0.01686570E+02







Source: FIT TO BAC-MP4 DATA WITH H298=101.5 PER MILLER

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

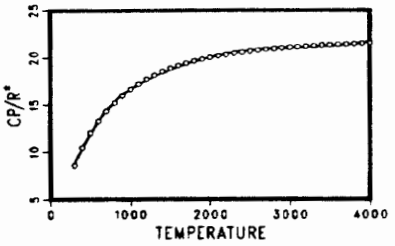
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

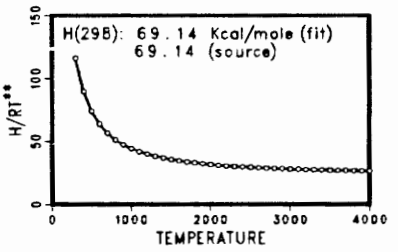
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

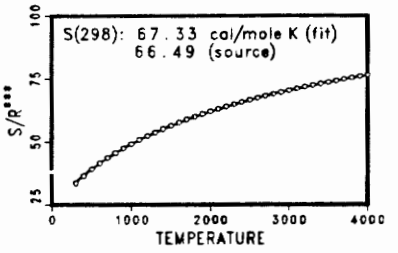
Species: CH2CHCCH BUT-1-YN-3-ENE PLANAR CS GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03233893E+02	0.01865634E+00	0.12703205E-05	-0.09410096E-07	0.02956110E-10	0.03301097E+06	0.09922676E+02
1000-4000K	0.10697773E+02	0.06982014E-01	-0.06567747E-05	-0.03884517E-08	0.07200946E-12	0.03034803E+06	-0.03128430E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

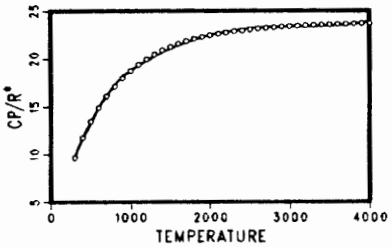
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

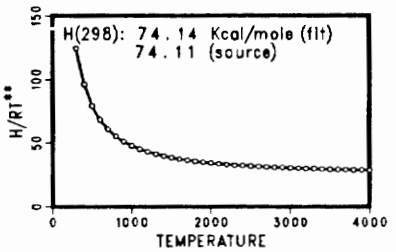
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

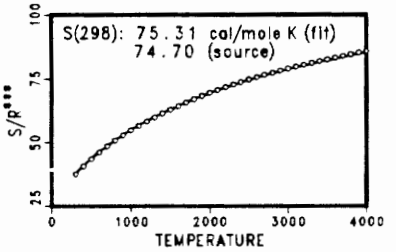
Species: CH2CHCCH2 CS GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03879443E+02	0.01997663E+00	0.01872777E-04	-0.09306953E-07	0.02386116E-10	0.03526859E+06	0.09842152E+02
1000-4000K	0.11997762E+02	0.07990580E-01	-0.08098172E-05	-0.04568733E-08	0.08636911E-12	0.03228493E+06	-0.03528494E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

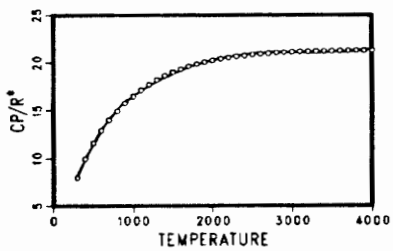
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

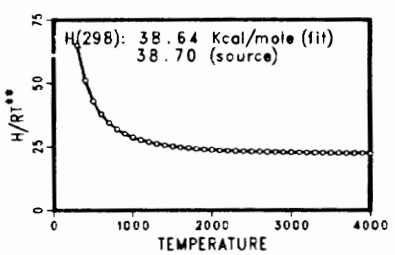
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

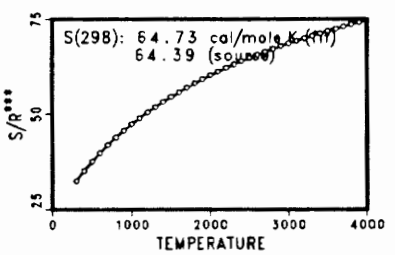
Species: CH2CHCH2 PROP-1-ENYL C2V 2A2 GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02276486E+02	0.01985564E+00	0.11238421E-05	-0.10145757E-07	0.03441342E-10	0.01789496E+06	0.13725151E+02
1000-4000K	0.09651539E+02	0.08075596E-01	-0.07965424E-05	-0.04650696E-08	0.08603281E-12	0.15300955E+05	-0.02686773E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

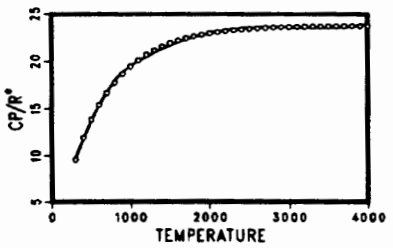
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

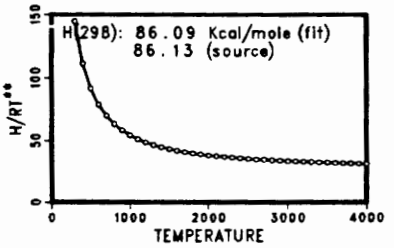
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

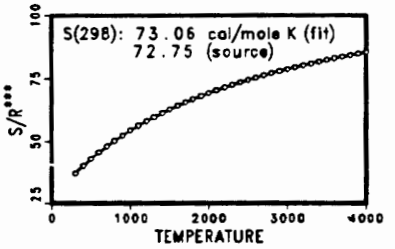
Species: CH2CHCHCH 2A' CCCC TRANS HCCH CIS GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02995240E+02	0.02288456E+00	0.01975471E-04	-0.11482454E-07	0.03197823E-10	0.04142218E+06	0.12894539E+02
1000-4000K	0.12865971E+02	0.07943369E-01	-0.08626466E-05	-0.04655635E-08	0.08951131E-12	0.03783552E+06	-0.04182502E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

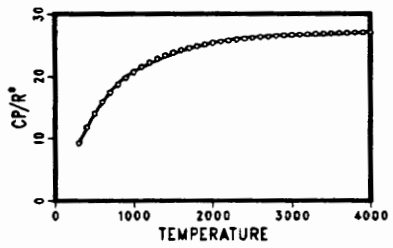
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

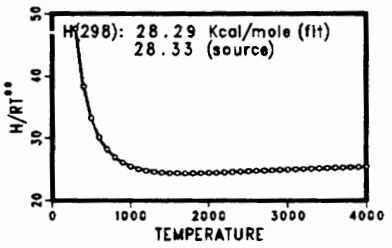
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

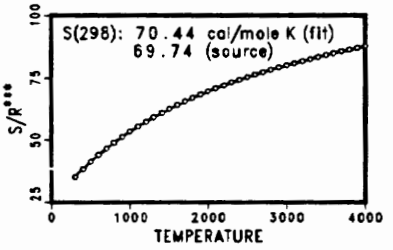
Species: CH2CHCHCH2 TRANS-1,3-BUTADIENE GAS As of: 12/01/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.01931624E+02	0.02479030E+00	0.03018071E-04	-0.11546856E-07	0.02586623E-10	0.12554682E+05	0.01701999E+03
1000-4000K	0.12544366E+02	0.09596525E-01	-0.09187012E-05	-0.05429640E-08	0.10053636E-12	0.08597330E+05	-0.04217450E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

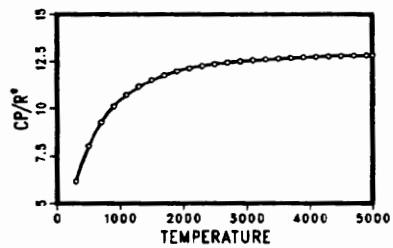
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

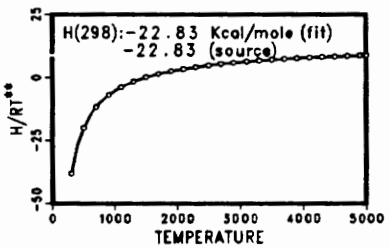
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

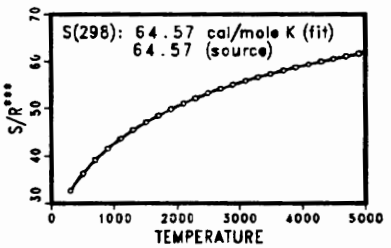
Species: CH2CL2 DICHLOROMETHANE GAS As of: 11/29/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.14232844E+01	0.02116658E+00	-0.02178088E-03	0.13458726E-07	-0.03811649E-10	-0.12686636E+05	0.01893445E+03
1000-5000K	0.05917327E+02	0.06762395E-01	-0.02676163E-04	0.04856687E-08	-0.03316973E-12	-0.13859256E+05	-0.03877739E+02







Source: SNLL FIT TO JANNAF DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

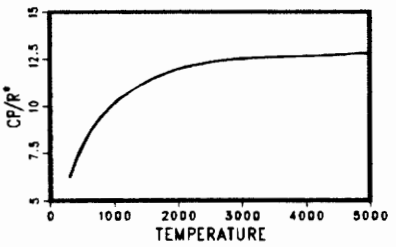
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

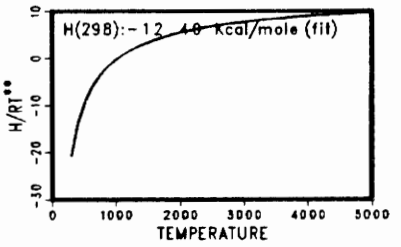
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

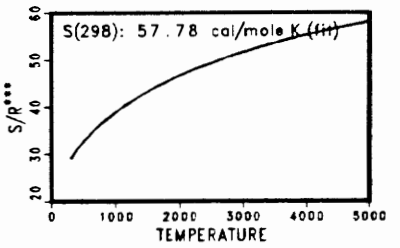
Species: CH2CO KETENE GAS As of: 12/16/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02974970E+02	0.12118712E-01	-0.02345045E-04	-0.06466685E-07	0.03905649E-10	-0.07632636E+05	0.08673553E+02
1000-5000K	0.06038817E+02	0.05804840E-01	-0.01920953E-04	0.02794484E-08	-0.14588676E-13	-0.08583402E+05	-0.07657581E+02







Source: BURCAT (C2H2O) (TECHNION REPORTS)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

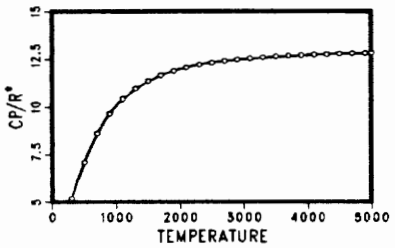
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

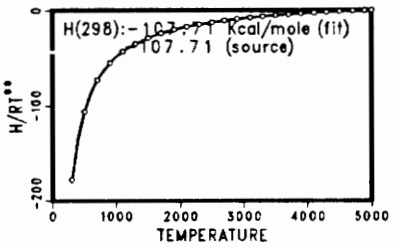
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

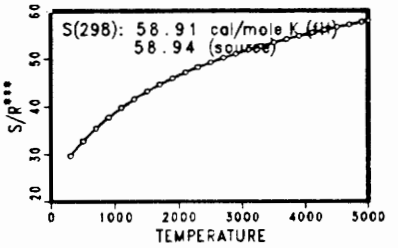
Species: CH2F2 DIFLUOROMETHANE GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03669433E+01	0.02168917E+00	-0.02441912E-03	0.01942310E-06	-0.06978343E-10	-0.05510102E+06	0.02202214E+03
1000-5000K	0.04730052E+02	0.07997300E-01	-0.03186045E-04	0.05801159E-08	-0.03967925E-12	-0.05637288E+06	-0.04954843E+01







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

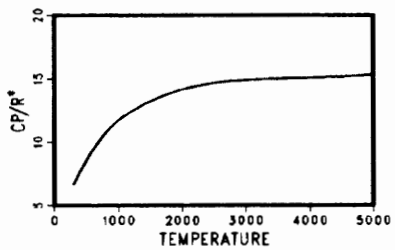
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

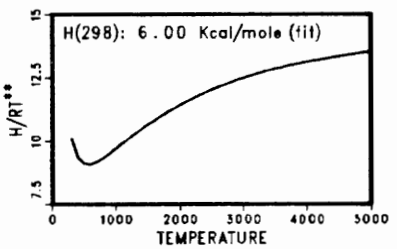
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

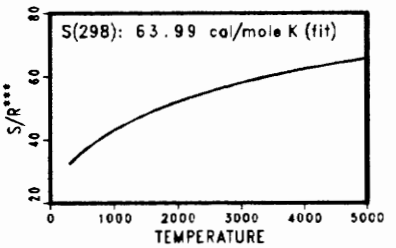
Species: CH2HCO CH2HCO RAD GAS As of: 12/01/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03409062E+02	0.10738574E-01	0.01891492E-04	-0.07158583E-07	0.02867385E-10	0.15214766E+04	0.09558290E+02
1000-5000K	0.05975670E+02	0.08130591E-01	-0.02743624E-04	0.04070304E-08	-0.02176017E-12	0.04903218E+04	-0.05045251E+02







Source: BURCAT, C2H3OA (CH2CHO) (TECHNION REPORTS)

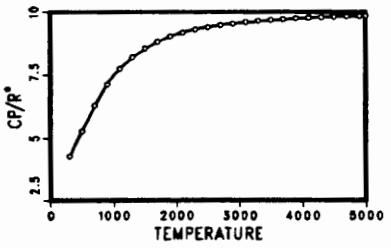
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

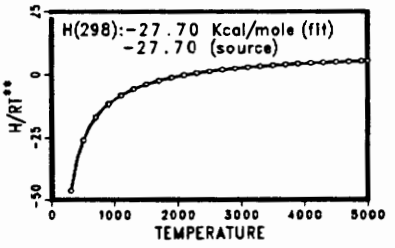
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

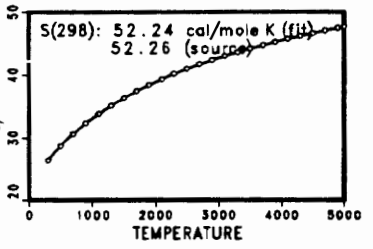
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CH2O FORMALDEHYDE GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.16527311E+01	0.12631439E-01	-0.01888168E-03	0.02050031E-06	-0.08413237E-10	-0.14865404E+05	0.13784820E+02
1000-5000K	0.02995606E+02	0.06681321E-01	-0.02628954E-04	0.04737153E-08	-0.03212517E-12	-0.15320369E+05	0.06912572E+02







Source: SNLL FIT TO JANAF TABLES

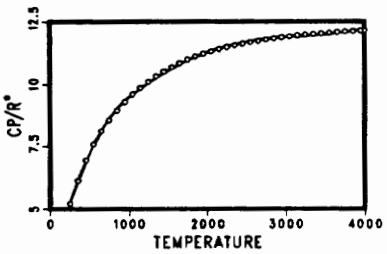
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

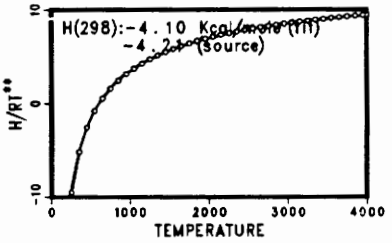
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

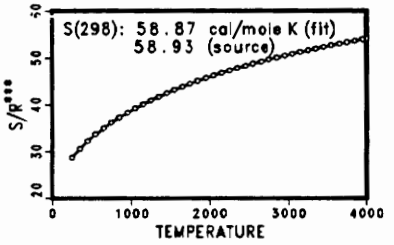
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CH2OH HYDROXYMETHYLENE RAD GAS As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0250-1000K	0.02862628E+02	0.10015273E-01	-0.05285435E-05	-0.05138539E-07	0.02246041E-10	-0.03349678E+05	0.10397938E+02
1000-4000K	0.06327520E+02	0.03608270E-01	-0.03201547E-05	-0.01938750E-08	0.03509704E-12	-0.04474509E+05	-0.08329365E+02







Source: SNLL FIT TO BAC-MP4 DATA

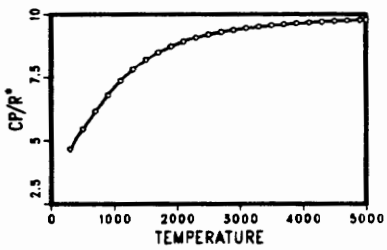
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

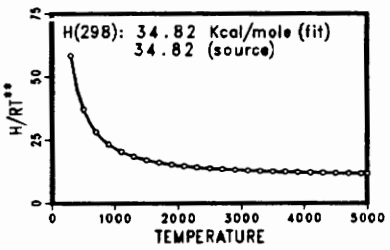
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

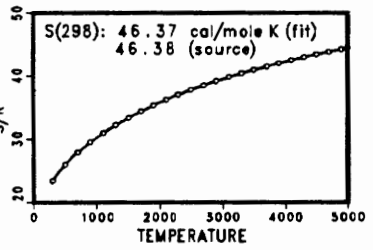
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CH3 METHYL GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02430442E+02	0.11124099E-01	-0.01680220E-03	0.16218288E-07	-0.05864952E-10	0.16423781E+05	0.06789794E+02
1000-5000K	0.02844051E+02	0.06137974E-01	-0.02230345E-04	0.03785161E-08	-0.02452159E-12	0.16437809E+05	0.05452697E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

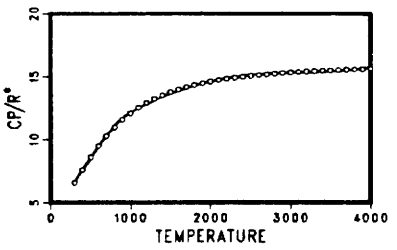
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

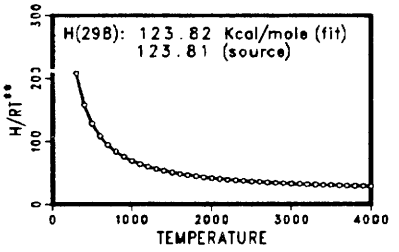
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

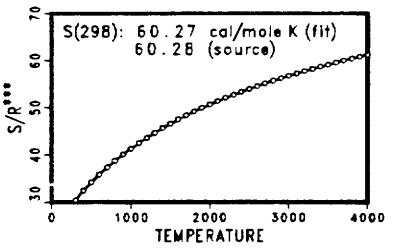
Species: CH3CC 1-PROPYNYL C3V 2A1 GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03798751E+02	0.08749062E-01	0.02523014E-04	-0.15293730E-08	-0.14105619E-11	0.06077425E+06	0.05989223E+02
1000-4000K	0.07640221E+02	0.05233556E-01	-0.05053635E-05	-0.02919772E-08	0.05445700E-12	0.05909763E+06	-0.16295735E+02







Source: SNLL FIT TO BAC-MP4 DATA

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

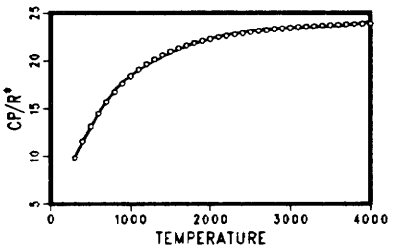
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

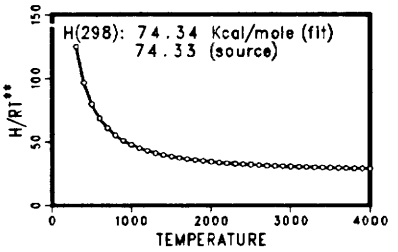
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

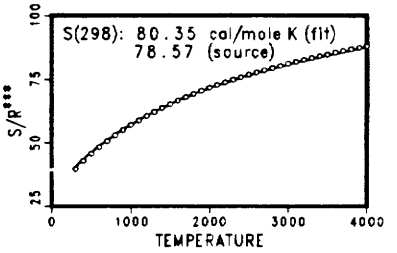
Species: CH3CCCH2 HCCC CIS GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.05068450E+02	0.15717475E-01	0.02968975E-04	-0.04990586E-07	-0.02984224E-11	0.03518855E+06	0.06791893E+02
1000-4000K	0.11565059E+02	0.08030297E-01	-0.07649450E-05	-0.04476533E-08	0.08313260E-12	0.03256813E+06	-0.03014066E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

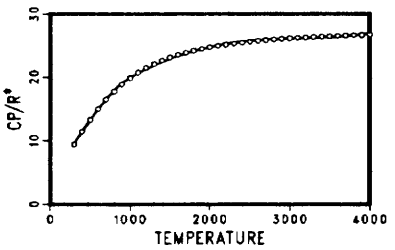
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

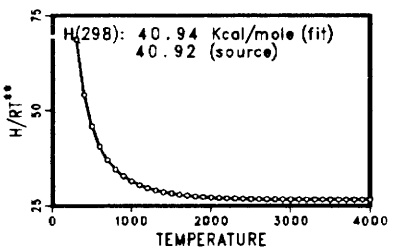
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

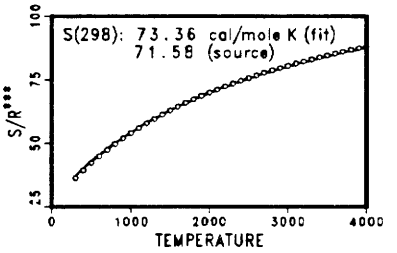
Species: CH3CCCH3 2-BUTYNE GAS As of: 12/01/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04077105E+02	0.01703158E+00	0.04707490E-04	-0.03767239E-07	-0.02066962E-10	0.01859756E+06	0.08444801E+02
1000-4000K	0.11336582E+02	0.10057637E-01	-0.09511323E-05	-0.05660496E-08	0.10494509E-12	0.15476594E+05	-0.03350866E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

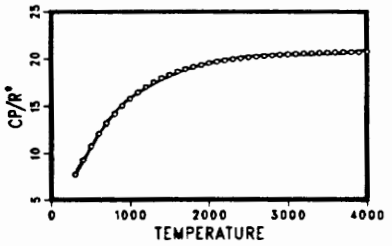
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

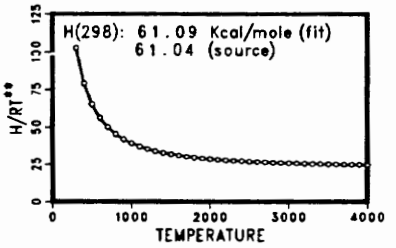
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

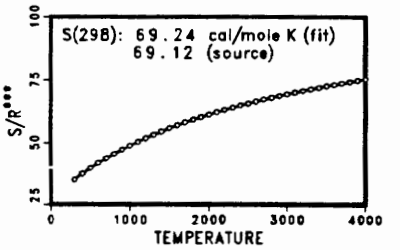
Species: CH3CCH2 1-METHYL-ETHENYL CS 2A' GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03385811E+02	0.14045337E-01	0.03204127E-04	-0.03824120E-07	-0.09053742E-11	0.02909066E+06	0.11266487E+02
1000-4000K	0.09101018E+02	0.07964167E-01	-0.07884945E-05	-0.04562036E-08	0.08529212E-12	0.02670680E+06	-0.02150559E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

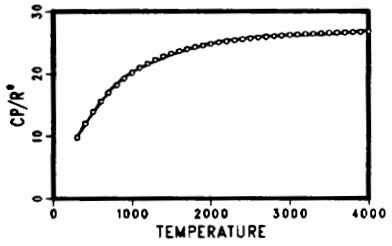
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

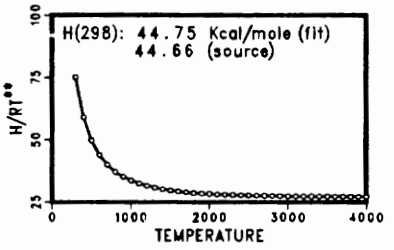
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

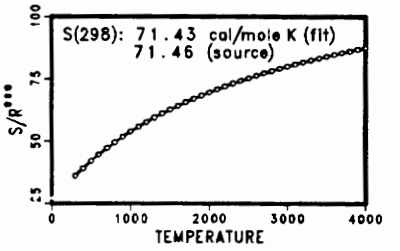
Species: CH3CH2CCH 1-BUTYNE GAS As of: 12/01/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03726043E+02	0.02053492E+00	0.03021439E-04	-0.08131812E-07	0.10952799E-11	0.02048821E+06	0.08538826E+02
1000-4000K	0.12006946E+02	0.09576069E-01	-0.08995018E-05	-0.05369808E-08	0.09934174E-12	0.01729419E+06	-0.03802692E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

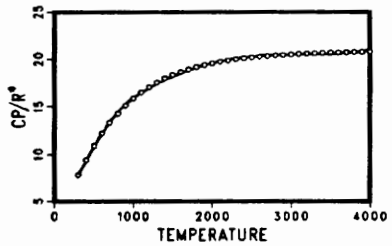
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

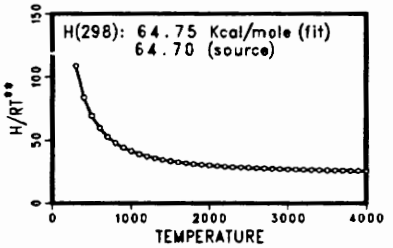
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

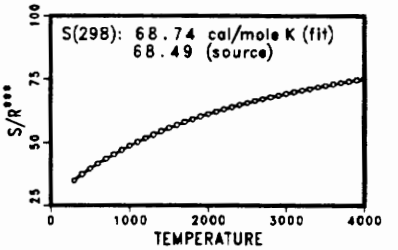
Species: CH3CHCH PROP-1-ENYL HC=CHCIS 2A' GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03161863E+02	0.15180997E-01	0.02722659E-04	-0.05177112E-07	0.05435286E-12	0.03095547E+06	0.11979733E+02
1000-4000K	0.09209764E+02	0.07871412E-01	-0.07724522E-05	-0.04497357E-08	0.08377272E-12	0.02853967E+06	-0.02232369E+03







Source: SNLL FIT TO BAC-MP4 DATA

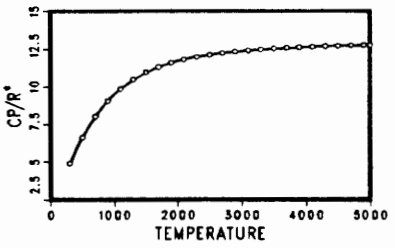
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

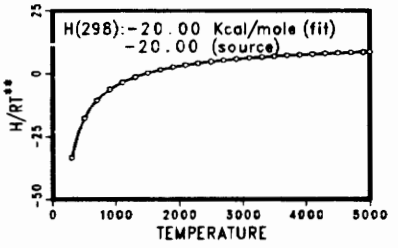
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

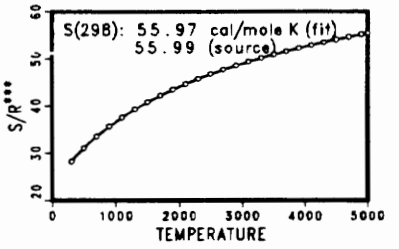
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CH3CL METHYL CHLORIDE GAS As of: 11/29/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04621901E+01	0.02068247E+00	-0.02553133E-03	0.02160310E-06	-0.07706816E-10	-0.10936672E+05	0.02032976E+03
1000-5000K	0.03633875E+02	0.08664625E-01	-0.03343871E-04	0.05950130E-08	-0.04001401E-12	-0.11776588E+05	0.04430651E+02





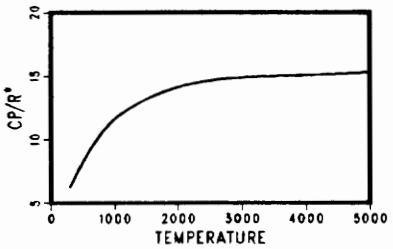


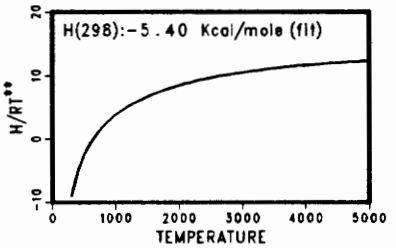
Source: SNLL FIT TO JANNAF DATA
Comments: ALSO CALLED CHLOROMETHANE

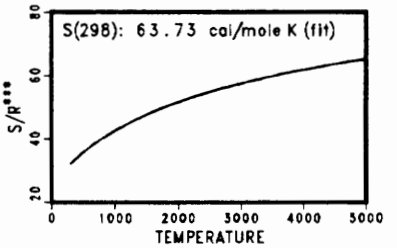
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CH3CO CH3CO RAD GAS As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03125278E+02	0.09778220E-01	0.04521448E-04	-0.09009462E-07	0.03193717E-10	-0.04108507E+05	0.11228854E+02
1000-5000K	0.05612279E+02	0.08449886E-01	-0.02854147E-04	0.04238376E-08	-0.02268403E-12	-0.05187863E+05	-0.03274949E+02





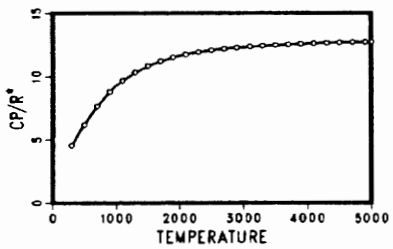


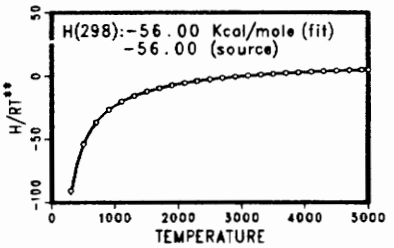
Source: BURCAT C2H3OB (CH3CO) (TECHNION REPORTS)

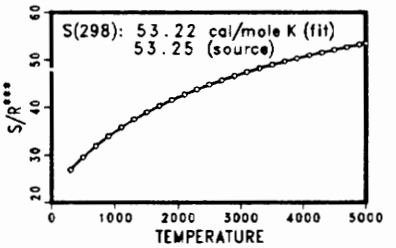
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CH3F FLUOROMETHANE GAS As of: 8/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02600910E+01	0.02000787E+00	-0.02662584E-03	0.02561176E-06	-0.09935237E-10	-0.02896232E+06	0.02031799E+03
1000-5000K	0.03014978E+02	0.09314397E-01	-0.03611697E-04	0.06443728E-08	-0.04339594E-12	-0.02977838E+06	0.06323815E+02







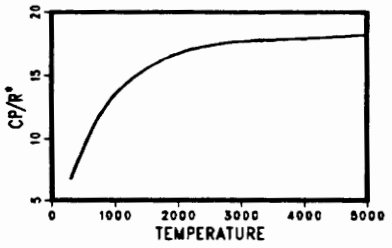
Source: SNLL FIT TO JANAF TABLES

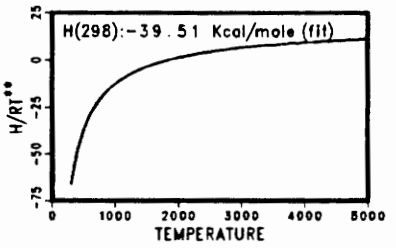
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

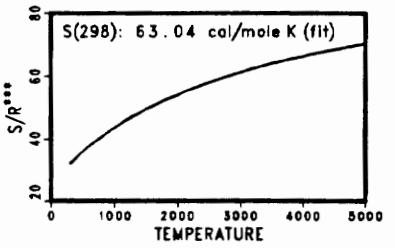
Species: CH3HCO ACETALDEHYDE GAS As of: 12/01/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02505695E+02	0.13369907E-01	0.04671953E-04	-0.11281401E-07	0.04263566E-10	-0.02124588E+06	0.13350887E+02
1000-5000K	0.05868650E+02	0.10794241E-01	-0.03645530E-04	0.05412912E-08	-0.02896844E-12	-0.02264568E+06	-0.06012946E+02







Source: BURCAT (C2H4OA) (TECHNION REPORTS)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

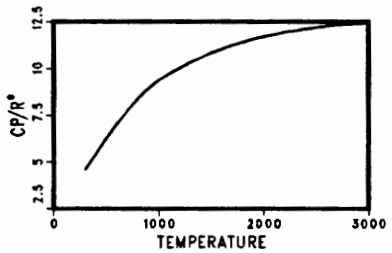
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

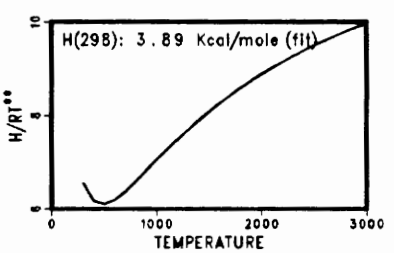
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

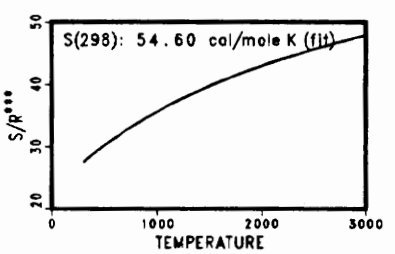
Species: CH3O METHYLOXIDE (METHOXY RAD) GAS As of: 12/16/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02106204E+02	0.07216595E-01	0.05338472E-04	-0.07377636E-07	0.02075610E-10	0.09786011E+04	0.13152177E+02
1000-3000K	0.03770799E+02	0.07871497E-01	-0.02656384E-04	0.03944431E-08	-0.02112616E-12	0.12783252E+03	0.02929575E+02







Source: BURCAT (LSU CALCULATIONS)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

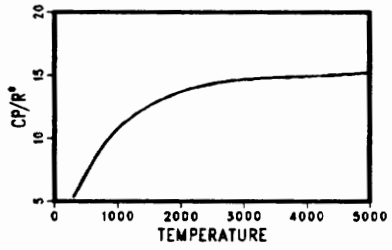
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

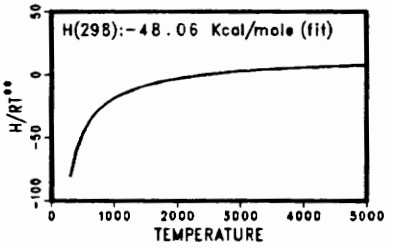
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

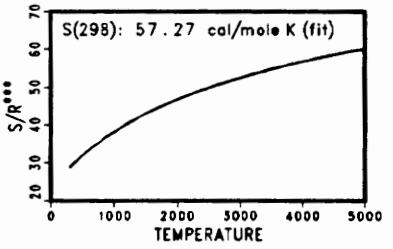
Species: CH3OH METHANOL GAS As of: 12/16/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02660115E+02	0.07341508E-01	0.07170050E-04	-0.08793194E-07	0.02390570E-10	-0.02535348E+06	0.11232631E+02
1000-5000K	0.04029061E+02	0.09376593E-01	-0.03050254E-04	0.04358793E-08	-0.02224723E-12	-0.02615791E+06	0.02378195E+02







Source: BURCAT (CH4O) (TECHNION REPORTS)

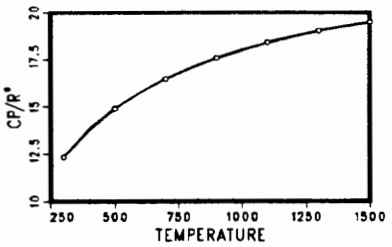
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

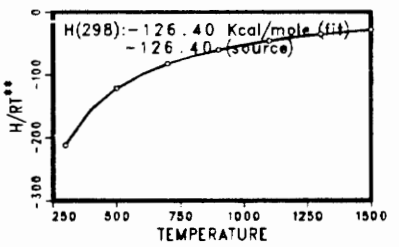
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

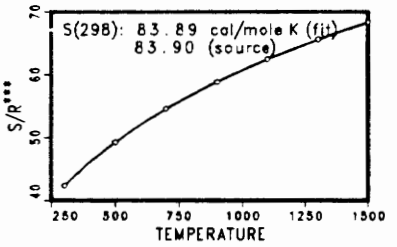
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CH3SICL3 TRICHLOROMETHYLSILANE GAS As of: 11/29/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04637712E+02	0.03733016E+00	-0.04798528E-03	0.03353132E-06	-0.09484405E-10	-0.06629348E+06	0.06524867E+02
1000-1500K	0.11803988E+02	0.07642902E-01	-0.09493348E-06	-0.01852654E-07	0.05302190E-11	-0.06773651E+06	-0.02794492E+03







Source: SNLL FIT TO JANNAF DATA

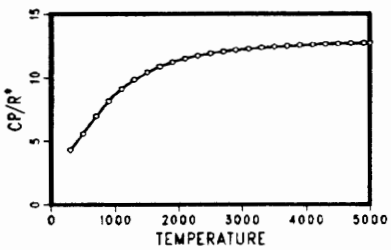
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

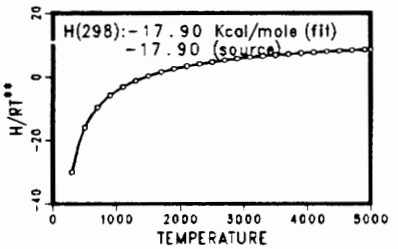
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

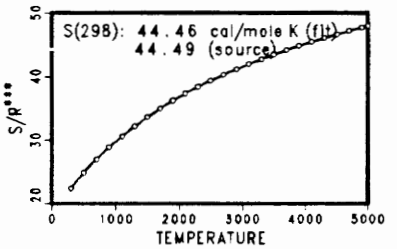
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CH4 METHANE GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.07787415E+01	0.01747668E+00	-0.02783409E-03	0.03049708E-06	-0.12239307E-10	-0.09825229E+05	0.13722195E+02
1000-5000K	0.01683478E+02	0.10237236E-01	-0.03875128E-04	0.06785585E-08	-0.04503423E-12	-0.10080787E+05	0.09623395E+02







Source: SNLL FIT TO JANAF TABLES

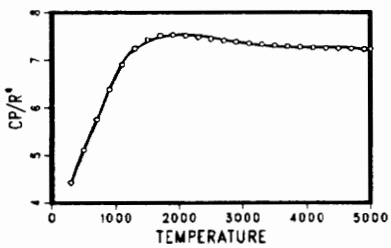
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

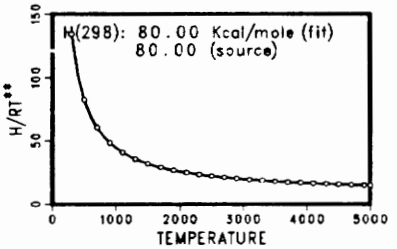
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

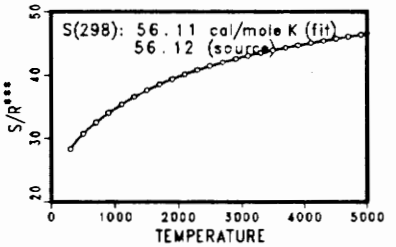
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CHCL MONOCHLOROMETHYLENE GAS As of: 11/29/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1200K	0.02781262E+02	0.07805384E-01	-0.10637111E-04	0.10654407E-07	-0.03916796E-10	0.03916144E+06	0.10455153E+02
1200-5000K	0.03216518E+02	0.05976969E-01	-0.02918238E-04	0.05912801E-08	-0.04297945E-12	0.03879839E+06	0.07793842E+02







Source: SNLL FIT TO JANNAF DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

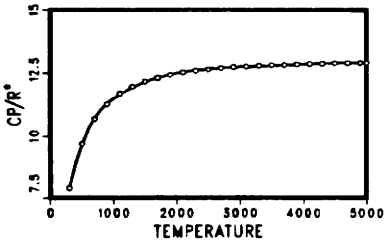
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

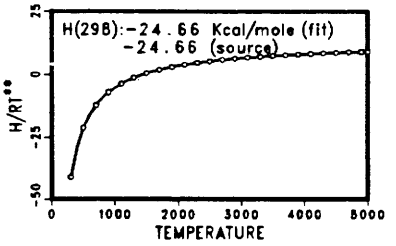
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

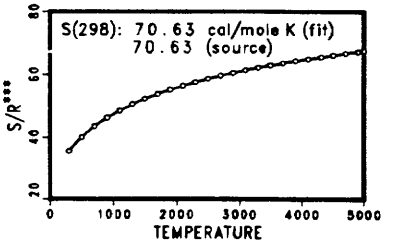
Species: CHCL3 CHLOROFORM GAS As of: 11/29/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03437633E+02	0.01941496E+00	-0.16494730E-04	0.05196545E-07	-0.06939614E-12	-0.14161262E+05	0.10863299E+02
1000-5000K	0.08523544E+02	0.04480142E-01	-0.01837282E-04	0.03424891E-08	-0.02387283E-12	-0.15461167E+05	-0.15056193E+02







Source: SNLL FIT TO JANNAF DATA
Comments: ALSO CALLED TRICHLOROMETHANE

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

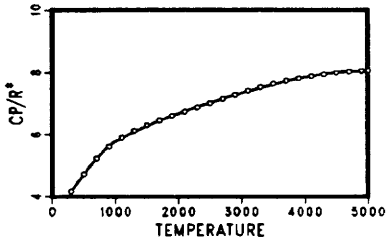
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

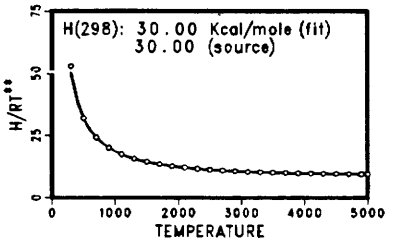
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

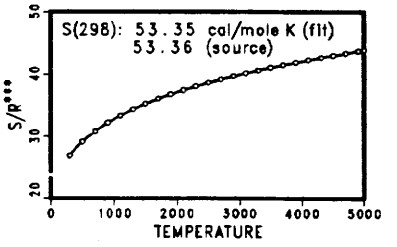
Species: CHF MONOFLUOROMETHYLENE GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03029060E+02	0.04850873E-01	-0.04971678E-04	0.05277968E-07	-0.02403154E-10	0.14014348E+05	0.08324101E+02
1000-5000K	0.04242812E+02	0.02066316E-01	-0.06527951E-05	0.13887000E-09	-0.12133360E-13	0.13559817E+05	0.01680196E+02







Source: SNLL FIT TO JANAF TABLES

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

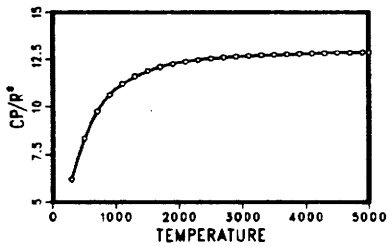
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

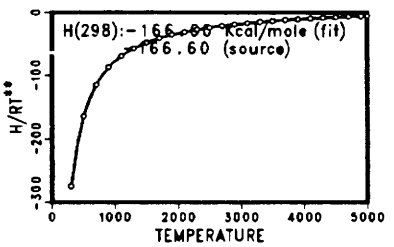
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

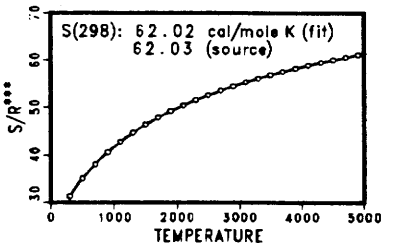
Species: CHF3 TRIFLUOROMETHANE GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.08725142E+01	0.02308431E+00	-0.02123718E-03	0.11144284E-07	-0.02909229E-10	-0.08496391E+06	0.02021498E+03
1000-5000K	0.06834333E+02	0.06248730E-01	-0.02575750E-04	0.04809112E-08	-0.03352074E-12	-0.08663771E+06	-0.10627405E+02







Source: SNLL FIT TO JANAF TABLES

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

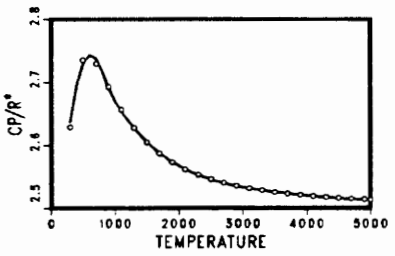
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

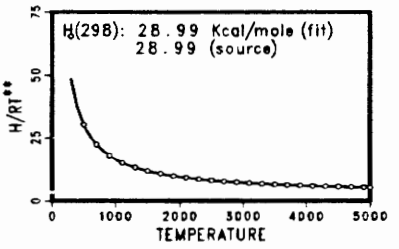
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

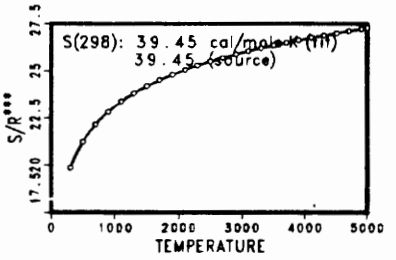
Species: CL CHLORINE, MONATOMIC GAS As of: 4/21/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02381576E+02	0.08891079E-02	0.04070475E-05	-0.02168943E-07	0.11608274E-11	0.13839987E+05	0.06021817E+02
1000-5000K	0.02920236E+02	-0.03597985E-02	0.12942943E-06	-0.02162776E-09	0.13765171E-14	0.13713381E+05	0.03262690E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

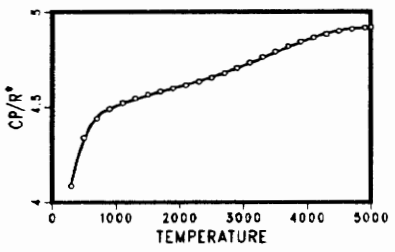
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

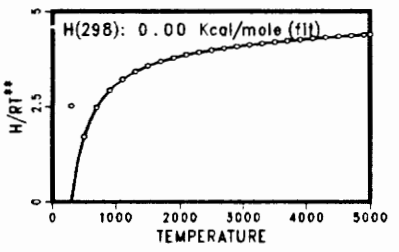
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

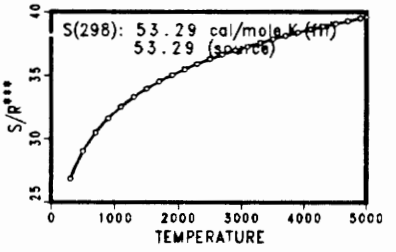
Species: CL2 CHLORINE, DIATOMIC GAS As of: 4/21/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03439587E+02	0.02870774E-01	-0.02385870E-04	0.02892918E-08	0.02915057E-11	-0.11317875E+04	0.06471359E+02
1000-5000K	0.04274586E+02	0.03717336E-02	-0.01893489E-05	0.05337465E-09	-0.05057602E-13	-0.13311486E+04	0.02256946E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

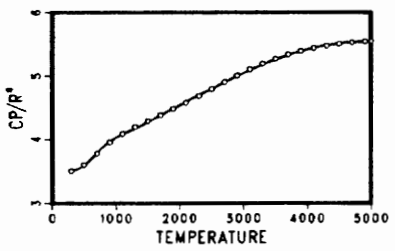
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

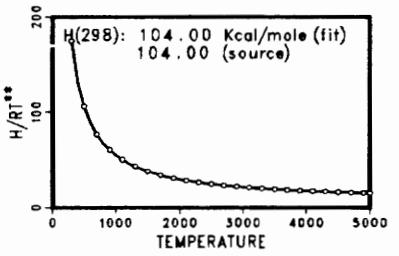
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

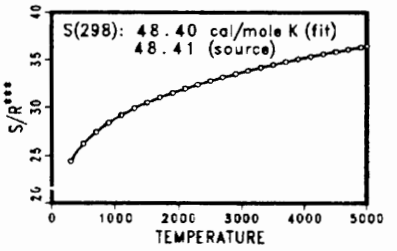
Species: CN CYANO GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03663204E+02	-0.11565290E-02	0.02163409E-04	0.01854208E-08	-0.08214695E-11	0.05128118E+06	0.03739015E+02
1000-5000K	0.03720119E+02	0.15183506E-03	0.01987381E-05	-0.03798371E-09	0.13282296E-14	0.05111626E+06	0.02888597E+02







Source: SNLL FIT TO JANAF TABLES

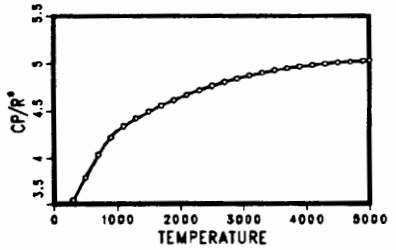
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

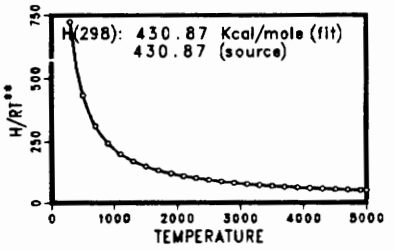
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

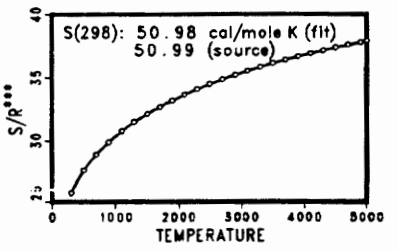
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CN+ CYANO, UNIPOSITIVE ION GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03118657E+02	0.15532581E-02	-0.09487764E-05	0.14795005E-08	-0.09096763E-11	0.02158512E+07	0.07456254E+02
1000-5000K	0.03701463E+02	0.07482931E-02	-0.01790173E-05	0.02366368E-09	-0.14370368E-14	0.02155966E+07	0.04108678E+02







Source: SNLL FIT TO JANAF TABLES

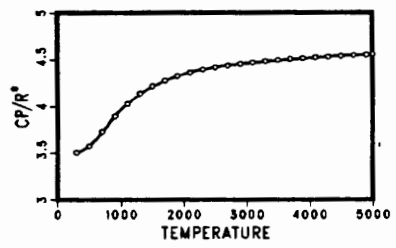
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

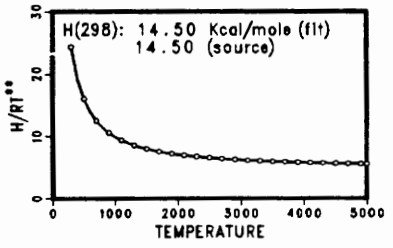
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

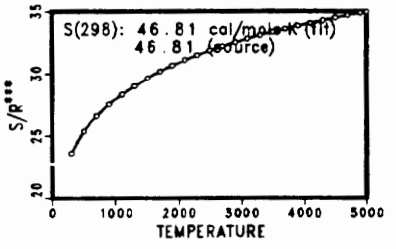
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CN- CYANO, UNINEGATIVE ION GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03278995E+02	0.14641916E-02	-0.03925899E-04	0.05629874E-07	-0.02473496E-10	0.06279509E+05	0.04568972E+02
1000-5000K	0.02981276E+02	0.14647728E-02	-0.05672737E-05	0.10176226E-09	-0.06870930E-13	0.06346098E+05	0.06171693E+02







Source: SNLL FIT TO JANAF TABLES

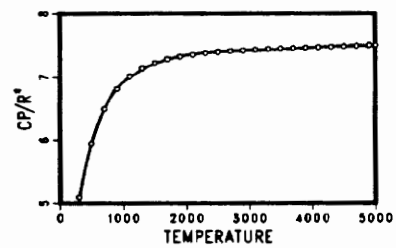
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

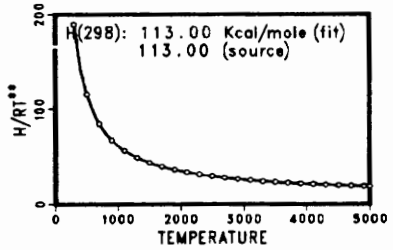
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

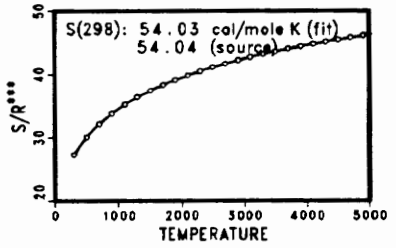
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CN2 NCN RADICAL GAS As of: 12/16/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03039963E+02	0.08812105E-01	-0.07605508E-04	0.03554357E-07	-0.08746100E-11	0.05563268E+06	0.07555298E+02
1000-5000K	0.05567064E+02	0.02100501E-01	-0.09010517E-05	0.01718571E-08	-0.12062552E-13	0.05489968E+06	-0.05630054E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

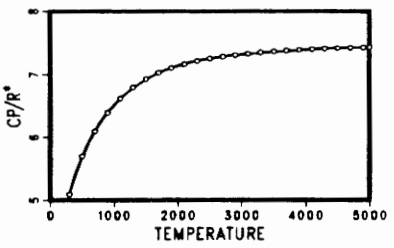
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

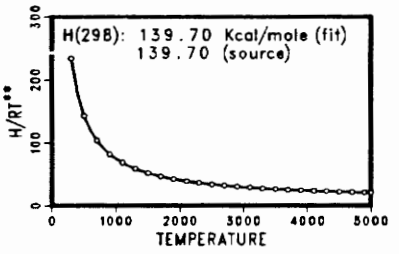
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

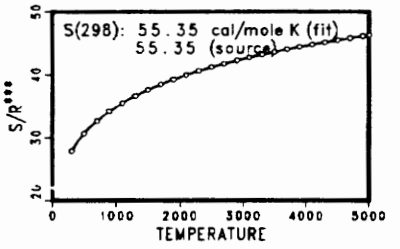
Species: CNN CNN RADICAL GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03524436E+02	0.07271923E-01	-0.08272698E-04	0.05628704E-07	-0.16415759E-11	0.06899647E+06	0.05932444E+02
1000-5000K	0.04785930E+02	0.02559553E-01	-0.10031326E-05	0.01807148E-08	-0.12273827E-13	0.06870411E+06	-0.02953957E+01







Source: SNLL FIT TO JANAF TABLES

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

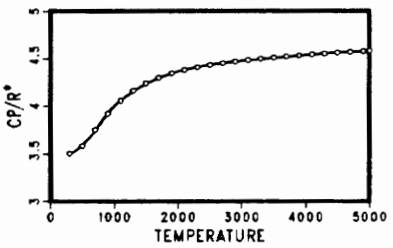
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

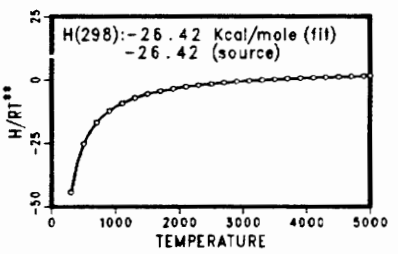
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

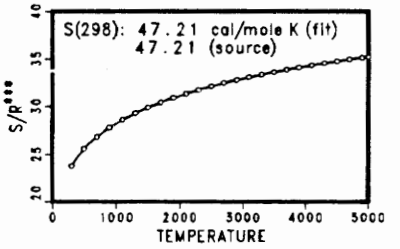
Species: CO CARBON MONOXIDE GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03262451E+02	0.15119409E-02	-0.03881755E-04	0.05581944E-07	-0.02474951E-10	-0.14310539E+05	0.04848897E+02
1000-5000K	0.03025078E+02	0.14426885E-02	-0.05630827E-05	0.10185813E-09	-0.06910951E-13	-0.14268350E+05	0.06108217E+02







Source: SNLL FIT TO JANAF TABLES

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

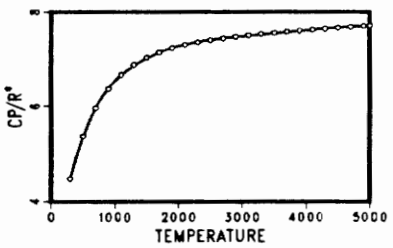
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

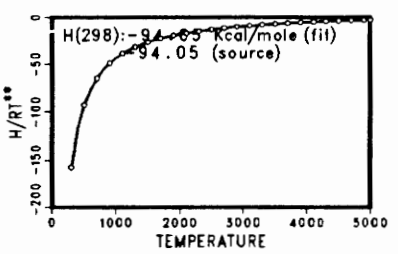
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

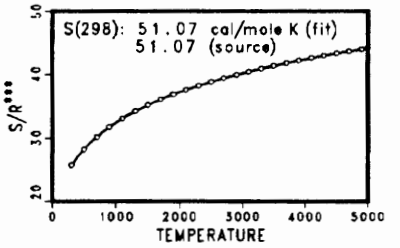
Species: CO2 CARBON DIOXIDE GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02275724E+02	0.09922072E-01	-0.10409113E-04	0.06866686E-07	-0.02117280E-10	-0.04837314E+06	0.10188488E+02
1000-5000K	0.04453623E+02	0.03140168E-01	-0.12784105E-05	0.02393996E-08	-0.16690333E-13	-0.04896696E+06	-0.09553959E+01







Source: SNLL FIT TO JANAF TABLES

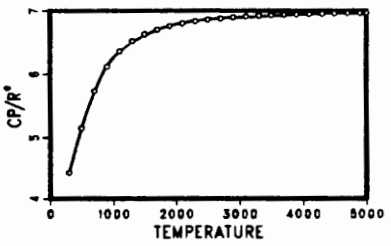
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

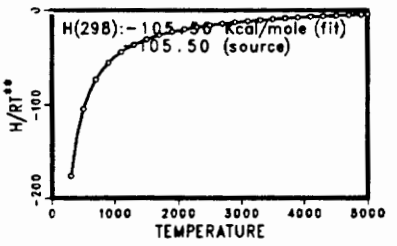
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

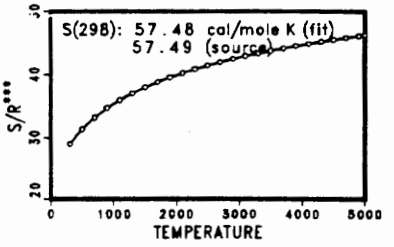
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CO2- CARBON DIOXIDE, UNINEGATIVE ION GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02637077E+02	0.07803230E-01	-0.08196187E-04	0.06537897E-07	-0.02520220E-10	-0.05416772E+06	0.11889549E+02
1000-5000K	0.04610574E+02	0.02532962E-01	-0.10701653E-05	0.02026770E-08	-0.14249581E-13	-0.05479881E+06	0.14496295E+01







Source: SNLL FIT TO JANAF TABLES

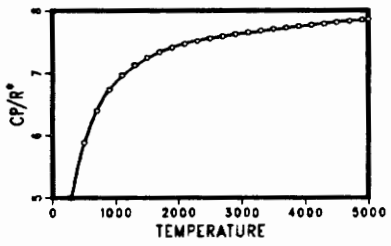
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

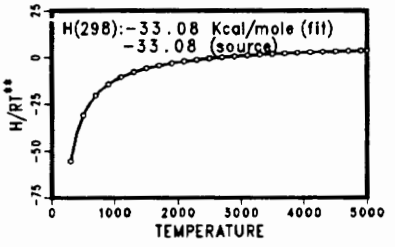
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

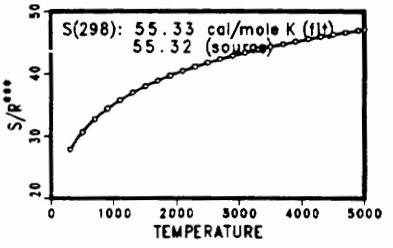
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: COS CARBON OXYSULFIDE GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02858530E+02	0.09515458E-01	-0.08884915E-04	0.04220994E-07	-0.08557340E-11	-0.01785144E+06	0.09081989E+02
1000-5000K	0.05191924E+02	0.02506123E-01	-0.10243963E-05	0.01943914E-08	-0.13707999E-13	-0.01846210E+06	-0.02825755E+02







Source: SNLL FIT TO JANAF TABLES

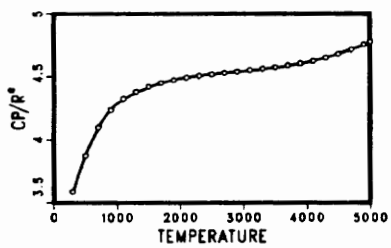
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

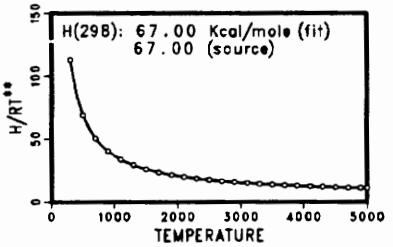
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

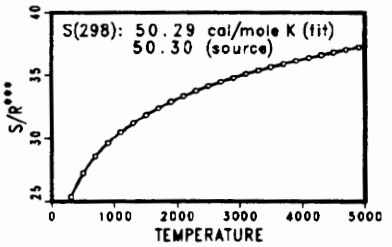
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CS CARBON MONOSULFIDE GAS As of: 12/16/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02938623E+02	0.02724351E-01	-0.02397706E-04	0.01689500E-07	-0.06665050E-11	0.03273992E+06	0.07848720E+02
1000-5000K	0.03737430E+02	0.08180451E-02	-0.03178918E-05	0.05356801E-09	-0.02886194E-13	0.03247725E+06	0.03576556E+02







Source: SNLL FIT TO JANAF TABLES

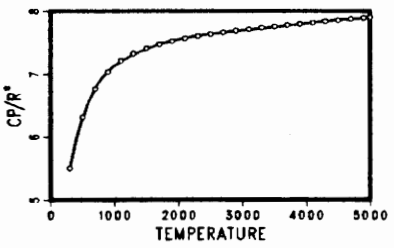
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

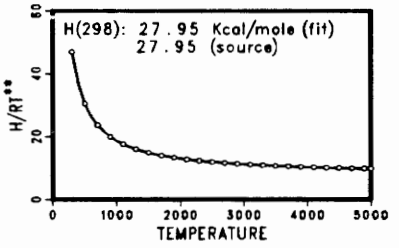
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

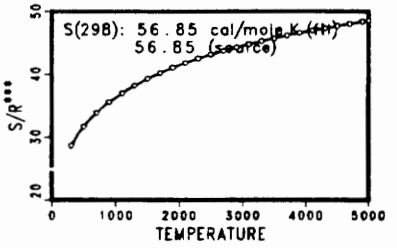
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: CS2 CARBON DISULFIDE GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03566139E+02	0.08374927E-01	-0.06835704E-04	0.02091214E-07	-0.06737193E-12	0.12688482E+05	0.06085967E+02
1000-5000K	0.05930515E+02	0.01813645E-01	-0.07492172E-05	0.14458920E-09	-0.10326380E-13	0.12051166E+05	-0.06093909E+02







Source: SNLL FIT TO JANAF TABLES

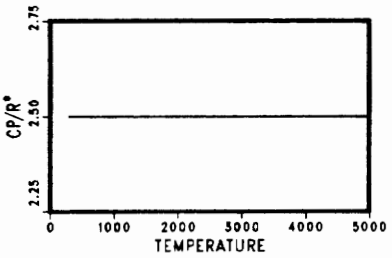
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

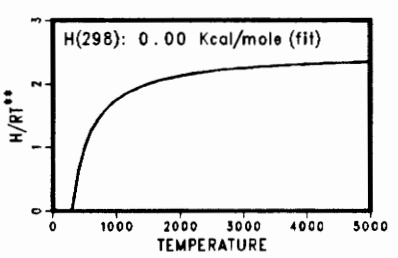
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

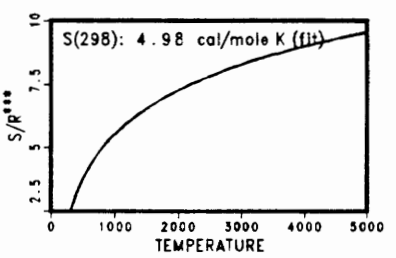
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: E ELECTRON GAS As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02500000E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	-0.07453750E+04	-0.11734026E+02
1000-5000K	0.02500000E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	-0.07453749E+04	-0.11734026E+02







Source: NASA FIT TO NASA-LEWIS DATA

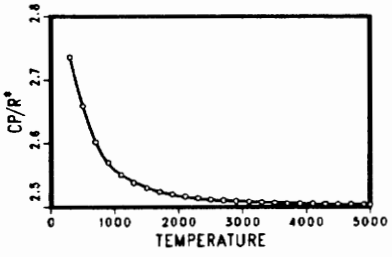
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

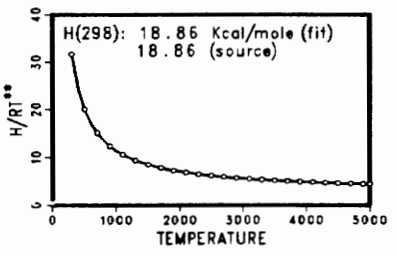
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

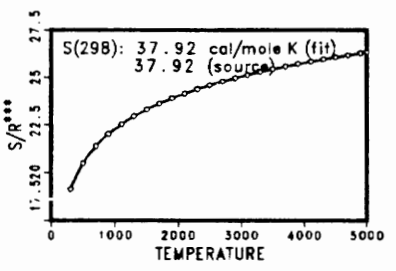
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: F FLUORINE, MONATOMIC GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02913904E+02	-0.07336339E-02	0.05571015E-05	-0.02666871E-08	0.08643255E-12	0.08651201E+05	0.02677115E+02
1000-5000K	0.02687459E+02	-0.02010358E-02	0.08597957E-06	-0.16449738E-10	0.11661605E-14	0.08722883E+05	0.03882212E+02







Source: SNLL FIT TO JANAF TABLES

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

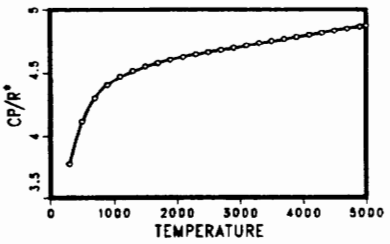
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

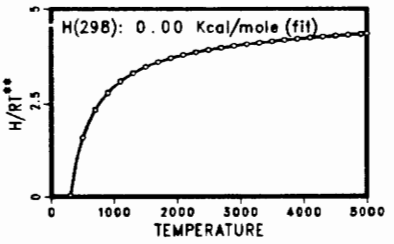
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

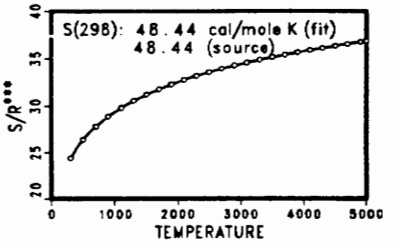
Species: F2 FLUORINE, DIATOMIC (REF ST) GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02940287E+02	0.03491491E-01	-0.02458207E-04	0.01837073E-08	0.02850916E-11	-0.10104296E+04	0.06694194E+02
1000-5000K	0.04018308E+02	0.06221479E-02	-0.02420845E-05	0.04742076E-09	-0.03418141E-13	-0.13007128E+04	0.11263273E+01







Source: SNLL FIT TO JANAF TABLES

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

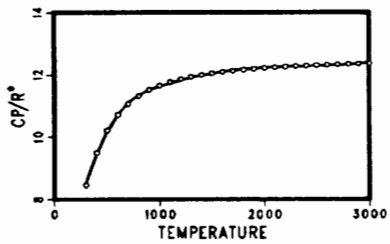
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

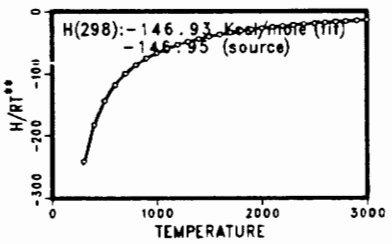
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

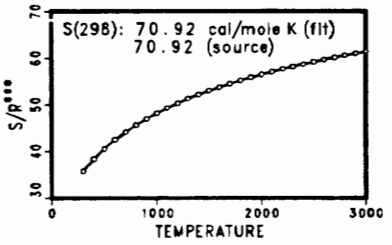
Species: F2SINH GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04951547E+02	0.13296361E-01	-0.02098648E-04	-0.10072757E-07	0.05552285E-10	-0.07597540E+06	0.03690891E+02
1000-3000K	0.10048301E+02	0.01983144E-01	-0.02703168E-05	-0.01767852E-08	0.04444367E-12	-0.07739741E+06	-0.02303888E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

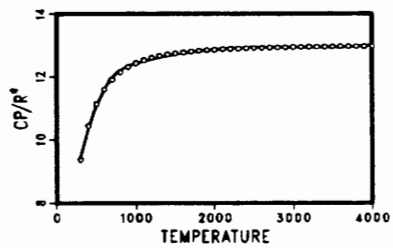
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

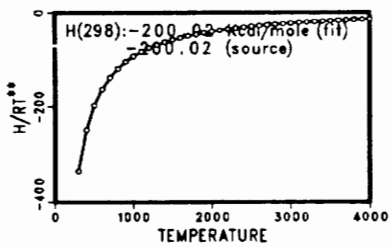
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

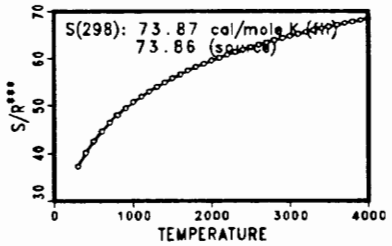
Species: F3SIN TRIFLUOROSILYLNITRENE GAS As of: 2/27/90

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.06028419E+02	0.12786807E-01	-0.01878856E-04	-0.09695426E-07	0.05184847E-10	-0.10299499E+06	-0.08217830E+01
1000-4000K	0.11512423E+02	0.11150295E-02	-0.16054655E-06	-0.05271933E-09	0.11608998E-13	-0.10459191E+06	-0.02981224E+03







Source: SNL FIT TO BAC-MP4 DATA

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

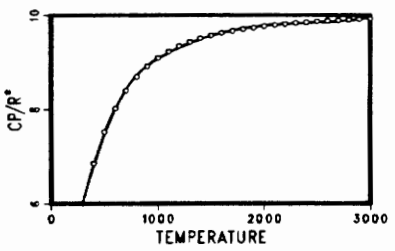
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

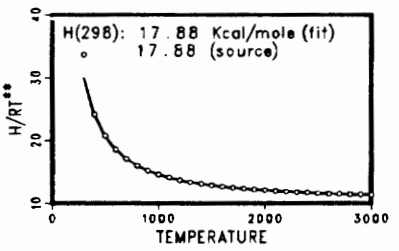
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

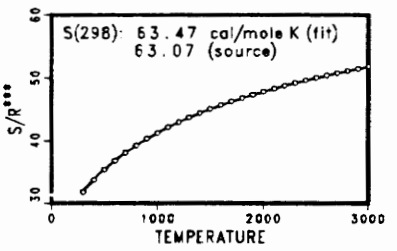
Species: FNNF CIS-DIFLUORODIAZINE GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03127143E+02	0.10571342E-01	-0.09746113E-05	-0.07208357E-07	0.03567978E-10	0.07615830E+05	0.11074648E+02
1000-3000K	0.07255211E+02	0.02274409E-01	-0.02793346E-05	-0.02203843E-08	0.05359234E-12	0.06360352E+05	-0.10942477E+02







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

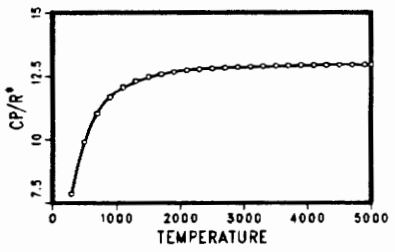
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

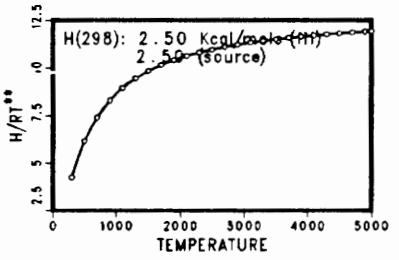
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

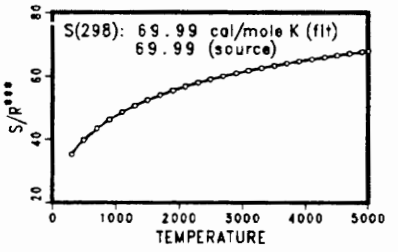
Species: FNO3 FLUORINE NITRATE GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02985786E+02	0.02094642E+00	-0.16527329E-04	0.04318770E-07	0.16607836E-12	-0.04237215E+04	0.12667929E+02
1000-5000K	0.09176275E+02	0.04219072E-01	-0.01835575E-04	0.03553717E-08	-0.02541078E-12	-0.02118638E+05	-0.01934397E+03







Source: SNLL FIT TO JANAF TAABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

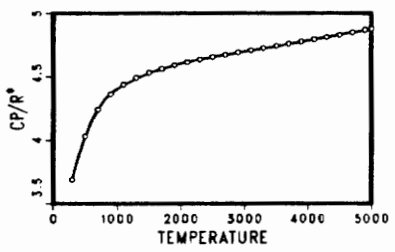
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

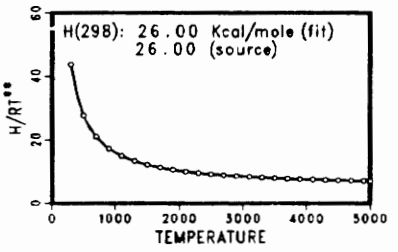
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

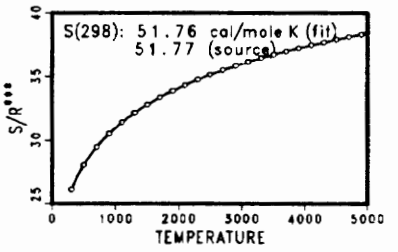
Species: FO FLUORINE MONOXIDE GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02879578E+02	0.03399121E-01	-0.02572854E-04	0.07422381E-08	-0.04328053E-12	0.12096633E+05	0.08738887E+02
1000-5000K	0.03913735E+02	0.07210714E-02	-0.02796614E-05	0.05337821E-09	-0.03720183E-13	0.11801406E+05	0.03346367E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

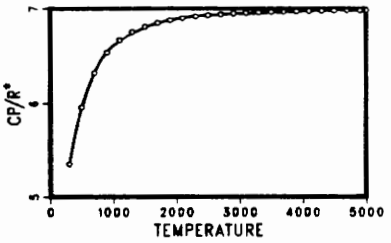
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

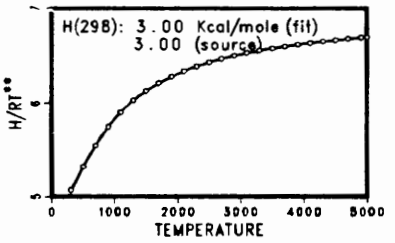
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

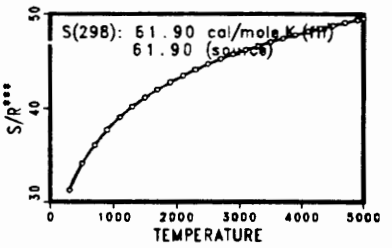
Species: F02 DIOXYGEN FLUORIDE GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03872542E+02	0.06409974E-01	-0.05517784E-04	0.02232770E-07	-0.03876157E-11	0.11570760E+03	0.07406949E+02
1000-5000K	0.05678971E+02	0.14424551E-02	-0.06229546E-05	0.11996118E-09	-0.08543416E-13	-0.03861836E+04	-0.01941811E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

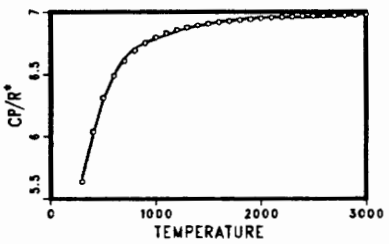
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

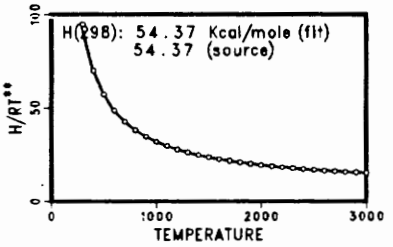
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

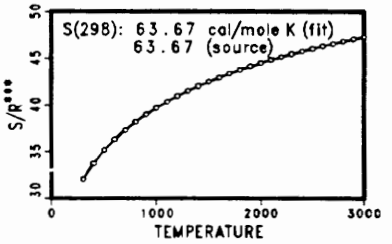
Species: FSIN GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04269969E+02	0.05298358E-01	-0.11038015E-05	-0.03962805E-07	0.02282982E-10	0.02587238E+06	0.06215038E+02
1000-3000K	0.06269572E+02	0.06747867E-02	-0.12419759E-06	-0.04970158E-09	0.14244521E-13	0.02533350E+06	-0.04201141E+02







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

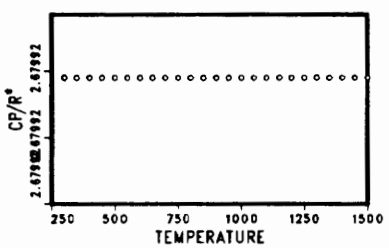
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

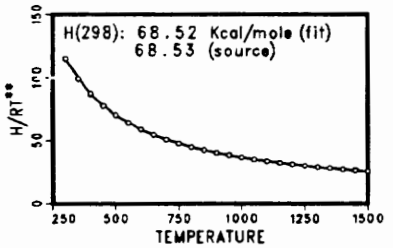
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

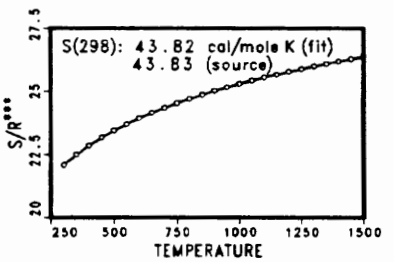
Species: GA GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.02679919E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.03368803E+06	0.06788109E+02
0600-1500K	0.02679919E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.03368804E+06	0.06788109E+02







Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT

Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

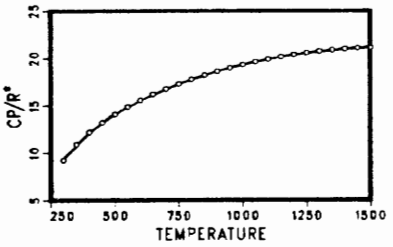
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

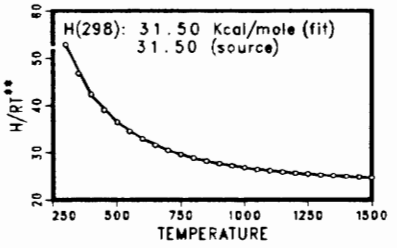
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

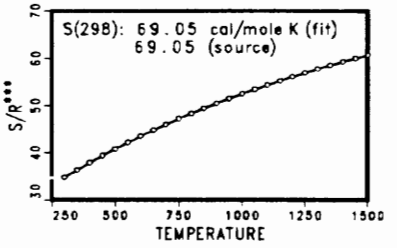
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: GA2H6 GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	-0.03914560E+02	0.04965434E+00	0.07401903E-04	-0.11241373E-06	0.08726339E-09	0.14930795E+05	0.04274882E+03
0600-1500K	0.06016247E+02	0.01788370E+00	-0.12042288E-06	-0.06487881E-07	0.02075367E-10	0.13125479E+05	-0.05228029E+02





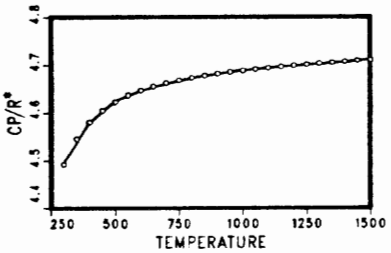


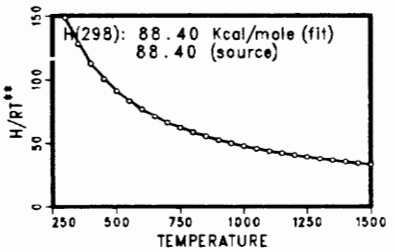
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

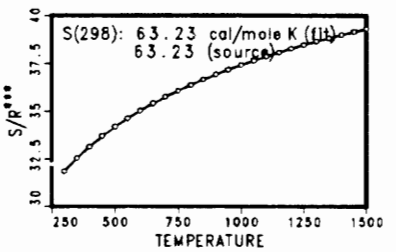
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: GAAS GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.03967473E+02	0.02318966E-01	-0.11454521E-05	-0.03411430E-07	0.03365821E-10	0.04321919E+06	0.08599628E+02
0600-1500K	0.04471149E+02	0.04238449E-02	-0.02279404E-05	-0.04441172E-10	0.02618952E-12	0.04313359E+06	0.06212470E+02





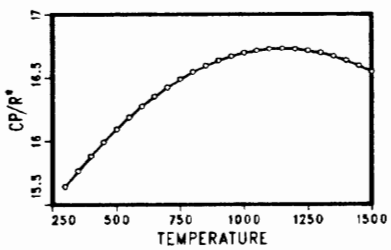


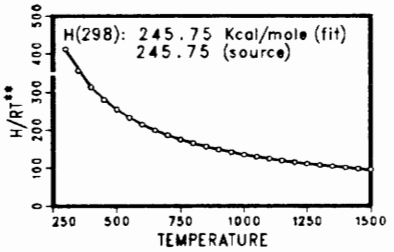
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

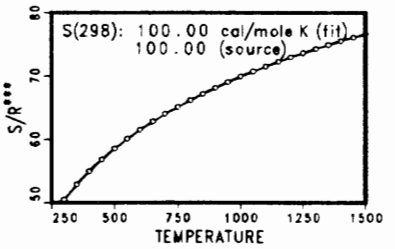
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: GAAS(3,C) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.14701892E+02	0.03827728E-01	-0.02945747E-04	0.02465370E-07	-0.15205979E-11	0.11914958E+06	-0.03445955E+03
0600-1500K	0.14852467E+02	0.02959435E-01	-0.07124246E-05	-0.05316048E-08	0.12873211E-12	0.11912617E+06	-0.03514144E+03





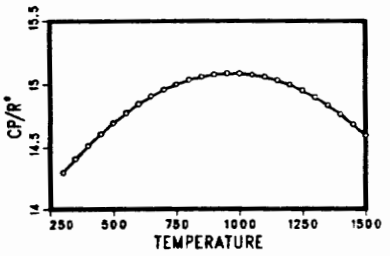


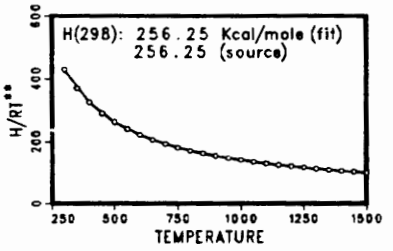
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

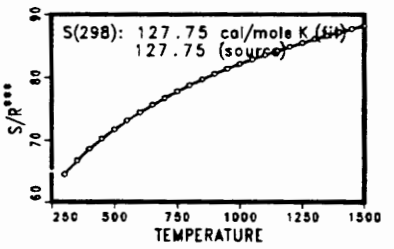
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: GAAS(3,L) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.13412763E+02	0.03617689E-01	-0.02726208E-04	0.01877183E-07	-0.12591780E-11	0.12482649E+06	-0.13091947E+02
0600-1500K	0.13568498E+02	0.02802435E-01	-0.07969918E-05	-0.06437098E-08	0.15602546E-12	0.12480055E+06	-0.13810628E+02





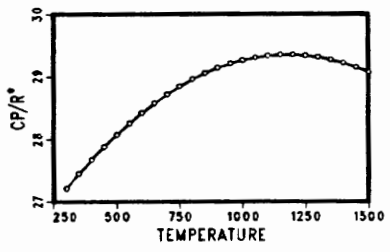


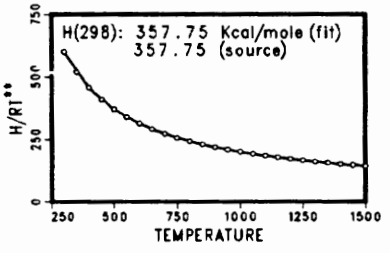
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

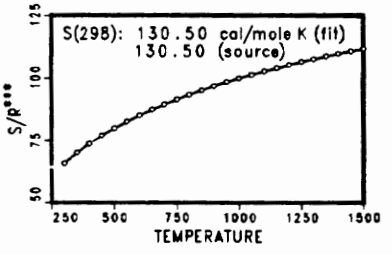
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: GAAS(5,C) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.02546511E+03	0.07014337E-01	-0.04881356E-04	0.03825484E-07	-0.02450420E-10	0.01721819E+07	-0.08130267E+03
0600-1500K	0.02573672E+03	0.05523956E-01	-0.12034680E-05	-0.10437431E-08	0.02528930E-11	0.01721381E+07	-0.08254488E+03





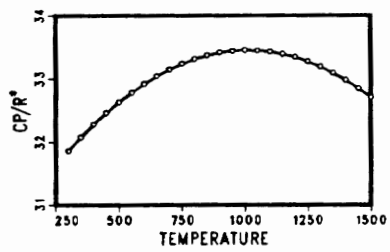


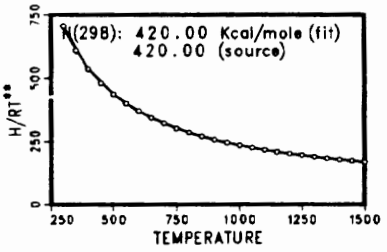
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

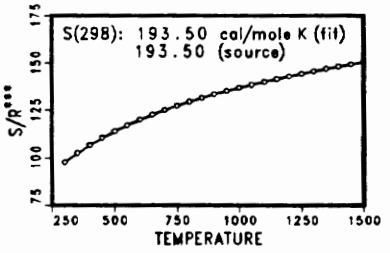
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: GAAS(5,L) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.03015255E+03	0.07234394E-01	-0.06497993E-04	0.05559584E-07	-0.03339653E-10	0.02021150E+07	-0.07630866E+03
0600-1500K	0.03045793E+03	0.05403151E-01	-0.16494765E-05	-0.09968843E-08	0.02413154E-11	0.02020691E+07	-0.07768010E+03





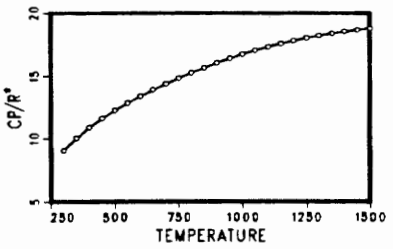


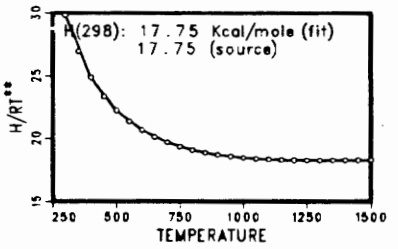
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

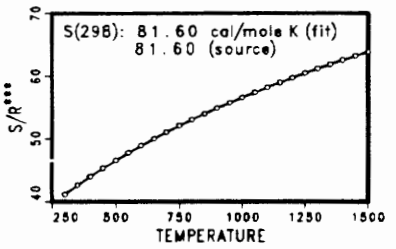
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: GAET ("ET" = C2H5, ETHYL) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.01846399E+02	0.02592050E+00	0.05522393E-04	-0.04977960E-06	0.03654361E-09	0.07264445E+04	0.02294638E+03
0600-1500K	0.05932970E+02	0.13424544E-01	0.04110518E-05	-0.04286069E-07	0.12387095E-11	0.06504863E+05	0.03090838E+02





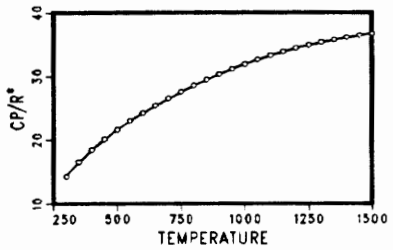


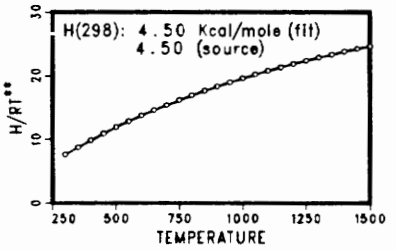
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

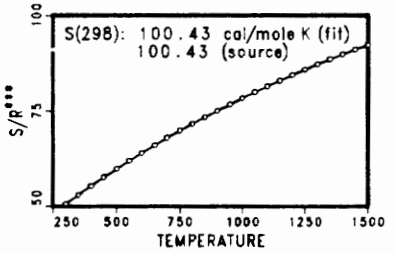
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: GAET2 ("ET" = C2H5, ETHYL) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	-0.02162930E+02	0.05892512E+00	0.14471449E-04	-0.11686023E-06	0.08526654E-09	0.03561840E+04	0.04552626E+03
0600-1500K	0.07213832E+02	0.03055227E+00	0.12494508E-05	-0.09990274E-07	0.02881965E-10	-0.13921194E+04	-0.07795098E+00





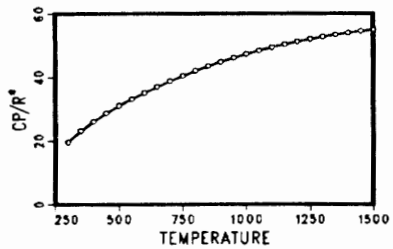


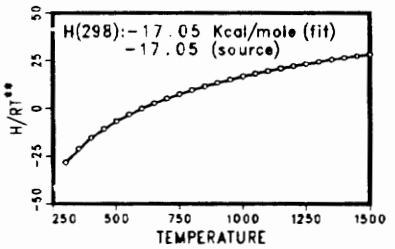
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

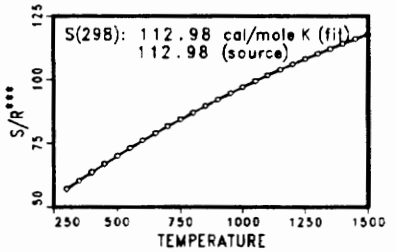
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: GAET3 ("ET" = C2H5, ETHYL) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	-0.06544288E+02	0.09332246E+00	0.02364121E-03	-0.01874104E-05	0.13677210E-09	-0.10676594E+05	0.06666796E+03
0600-1500K	0.08436453E+02	0.04804950E+00	0.02119157E-04	-0.15816849E-07	0.04571178E-10	-0.13469963E+05	-0.06196490E+02





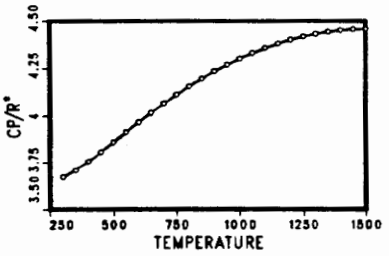


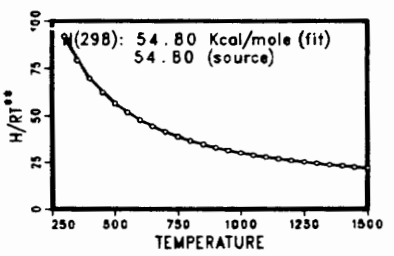
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

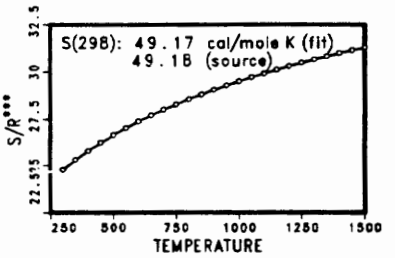
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: GAH GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.03524579E+02	0.03386213E-02	-0.02064013E-05	0.03220998E-07	-0.02936132E-10	0.02651074E+06	0.04554066E+02
0600-1500K	0.03232142E+02	0.13432469E-02	-0.04325498E-06	-0.02791841E-08	0.04973590E-12	0.02656059E+06	0.05947896E+02





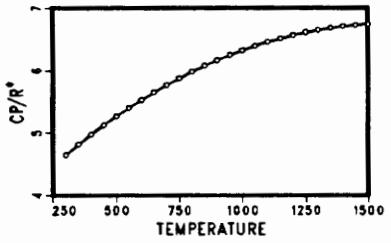


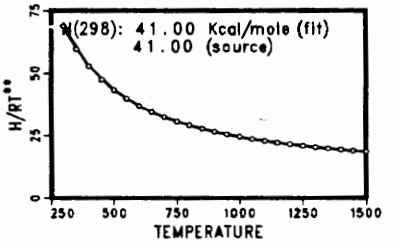
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

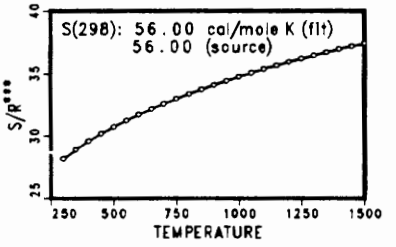
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: GAH2 GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.03559710E+02	0.03676741E-01	0.06484499E-05	-0.03109349E-07	0.15854136E-11	0.01940976E+06	0.06803081E+02
0600-1500K	0.03762384E+02	0.03210792E-01	0.02180096E-06	-0.08908394E-08	0.02219062E-11	0.01936646E+06	0.05783398E+02





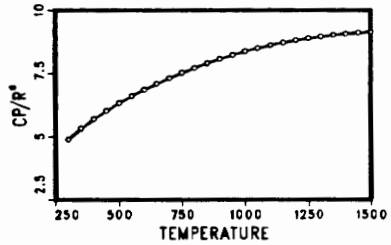


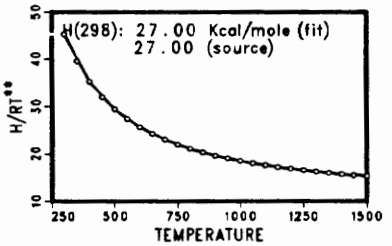
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

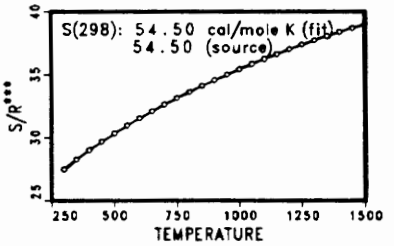
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: GAH3 GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.01726153E+02	0.11247386E-01	0.02447526E-04	-0.02026314E-06	0.14470000E-10	0.12586196E+05	0.14284450E+02
0600-1500K	0.03345475E+02	0.06399313E-01	0.11229964E-06	-0.02065899E-07	0.05780202E-11	0.12281851E+05	0.06394841E+02





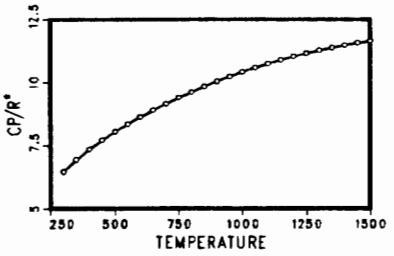


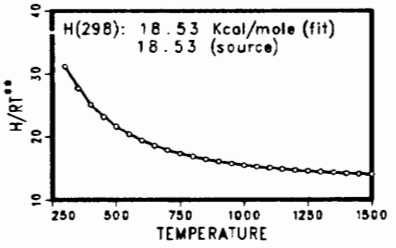
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

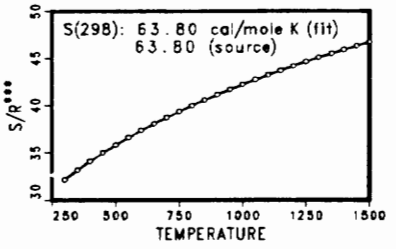
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: GAME ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.03054536E+02	0.12186402E-01	0.02332213E-04	-0.02121866E-06	0.15442261E-10	0.07885868E+05	0.11128781E+02
0600-1500K	0.04809857E+02	0.06824206E-01	0.02258235E-05	-0.02018341E-07	0.05736453E-11	0.07558677E+05	0.02595904E+02





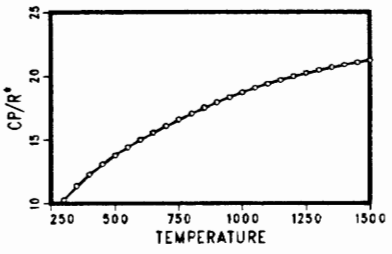


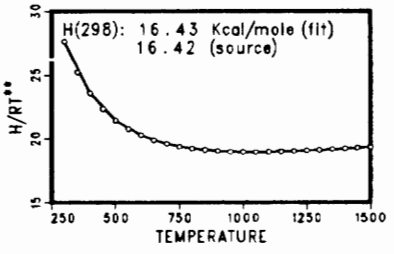
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

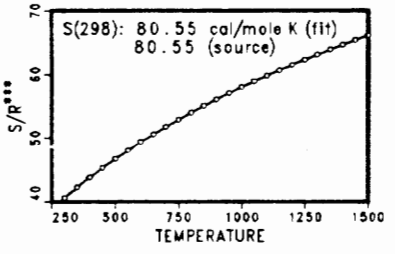
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: GAME2 ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.02257655E+02	0.02916445E+00	0.05669861E-04	-0.05709755E-06	0.04268905E-09	0.06341297E+05	0.01915435E+03
0600-1500K	0.07068372E+02	0.14216021E-01	0.05120694E-05	-0.04421986E-07	0.13096413E-11	0.05453790E+05	-0.04173960E+02





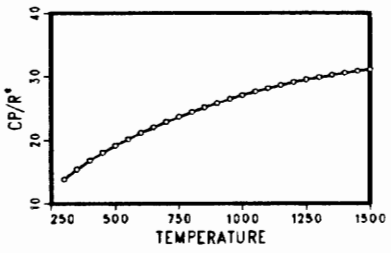


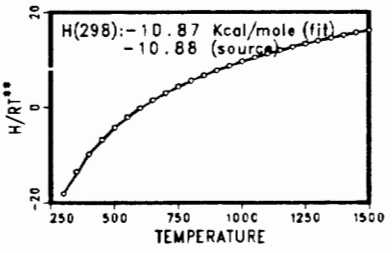
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

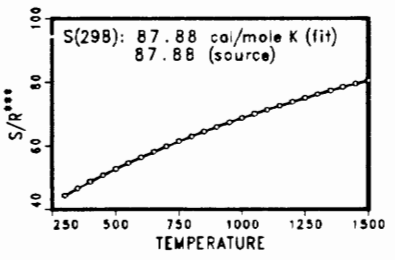
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: GAME3 ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.02120238E+02	0.04161029E+00	0.09959505E-04	-0.07846792E-06	0.05693396E-09	-0.07911968E+05	0.01988516E+03
0600-1500K	0.08410636E+02	0.02262803E+00	0.10430190E-05	-0.07049610E-07	0.02015307E-10	-0.09087271E+05	-0.10722496E+02





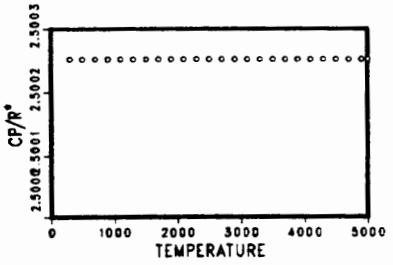


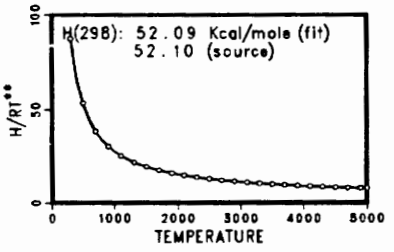
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

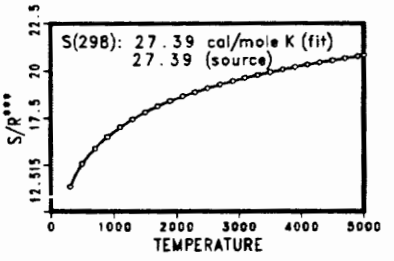
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: H HYDROGEN, MONATOMIC GAS As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02500000E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.02547162E+06	-0.04601176E+01
1000-5000K	0.02500000E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.02547162E+06	-0.04601176E+01







Source: NASA FIT TO JANAF TABLES

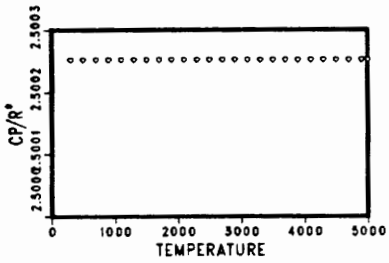
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

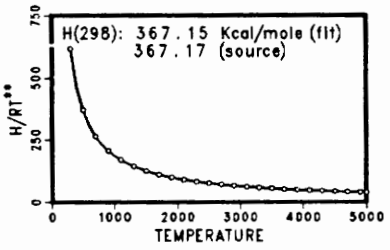
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

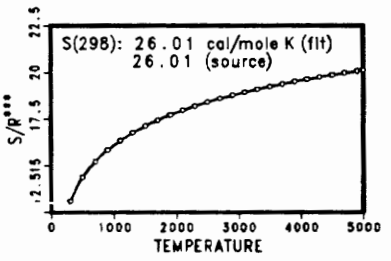
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: H+ PROTON GAS As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02500000E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.01840334E+07	-0.11538621E+01
1000-5000K	0.02500000E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.01840334E+07	-0.11538620E+01







Source: NASA FIT TO JANAF TABLES

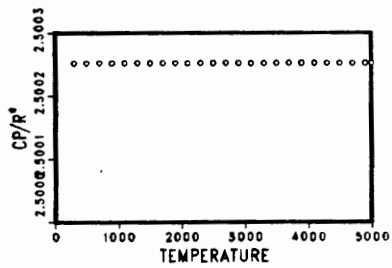
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

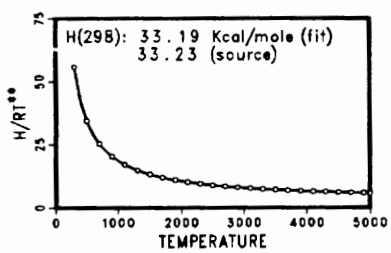
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

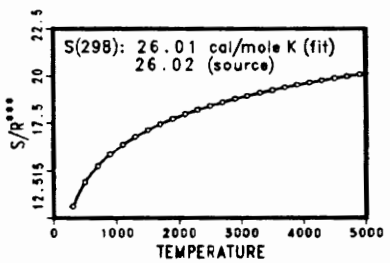
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: H- HYDROGEN, UNINEGATIVE ION GAS As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02500000E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.15961045E+05	-0.11524486E+01
1000-5000K	0.02500000E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.15961045E+05	-0.11524488E+01







Source: NASA FIT TO JANAF TABLES

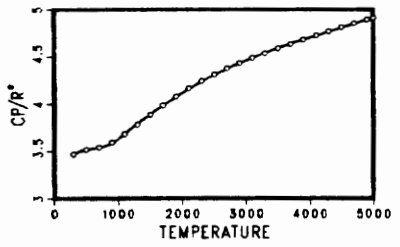
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

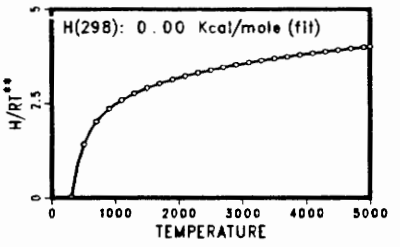
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

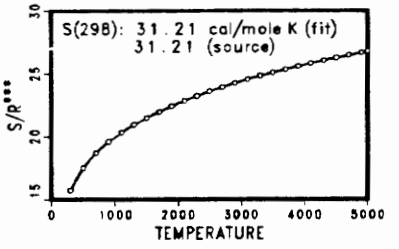
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: H2 HYDROGEN, DIATOMIC (REF ST) GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03298124E+02	0.08249441E-02	-0.08143015E-05	-0.09475434E-09	0.04134872E-11	-0.10125209E+04	-0.03294094E+02
1000-5000K	0.02991423E+02	0.07000644E-02	-0.05633828E-06	-0.09231578E-10	0.15827519E-14	-0.08350340E+04	-0.13551101E+01







Source: SNLL FIT TO JANAF TABLES

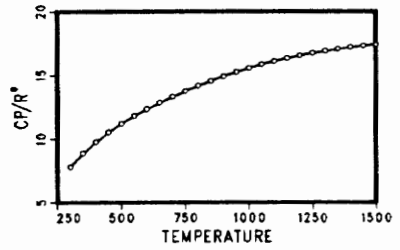
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

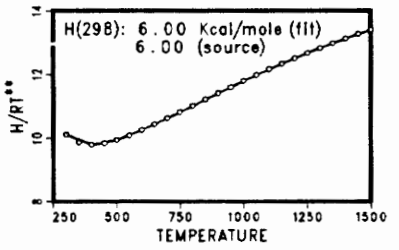
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

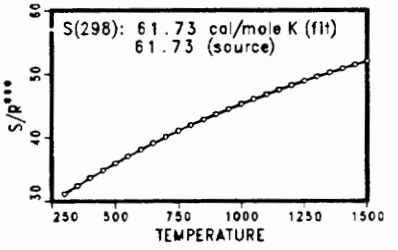
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: H2ALME ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	-0.06283259E+01	0.03089530E+00	0.05774090E-04	-0.06488033E-06	0.04907111E-09	0.01889333E+05	0.02565779E+03
0600-1500K	0.04898410E+02	0.13582233E-01	0.02611458E-05	-0.04575170E-07	0.13848023E-11	0.08743072E+04	-0.11131169E+01







Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

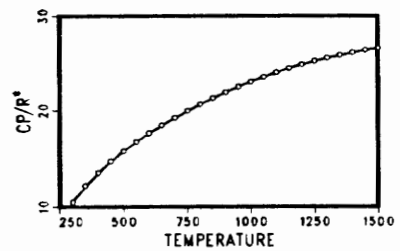
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

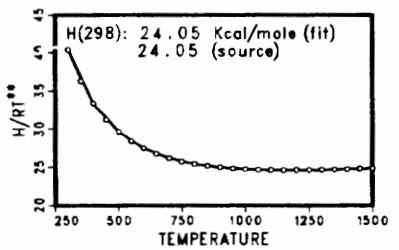
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

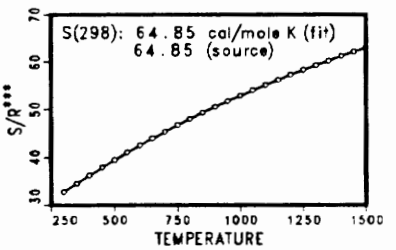
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: H2ASME ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	-0.02113506E+02	0.04564229E+00	0.09983227E-04	-0.09399697E-06	0.07014021E-09	0.10771701E+05	0.03132610E+03
0600-1500K	0.05686213E+02	0.02154421E+00	0.08185247E-05	-0.07069951E-07	0.02101522E-10	0.09331084E+05	-0.06513957E+02







Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

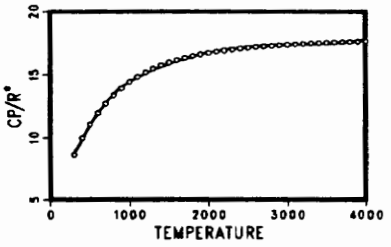
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

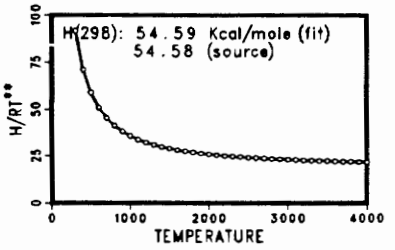
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

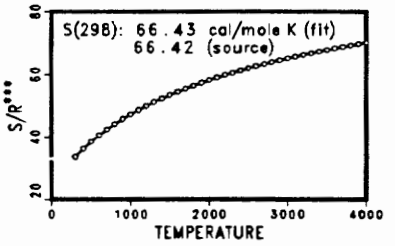
Species: H2C4O BUTADIENONE GAS As of: 12/01/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04810971E+02	0.13139988E-01	0.09865073E-05	-0.06120720E-07	0.16400028E-11	0.02545803E+06	0.02113424E+02
1000-4000K	0.10268878E+02	0.04896164E-01	-0.04885080E-05	-0.02708566E-08	0.05107013E-12	0.02346902E+06	-0.02815985E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

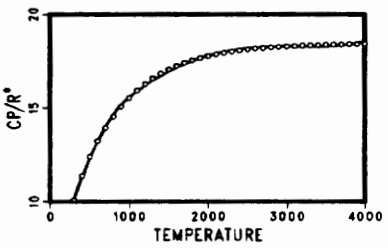
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

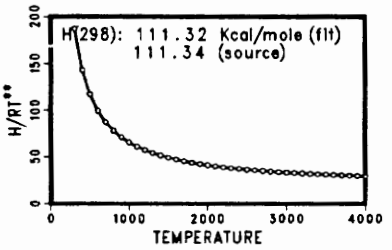
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

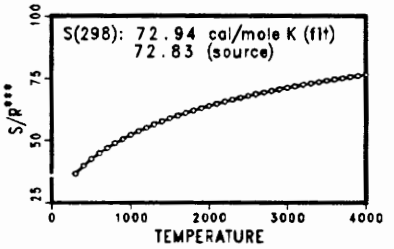
Species: H2CCCCH GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.06545799E+02	0.12424768E-01	0.05603226E-05	-0.05631141E-07	0.16652183E-11	0.05352502E+06	-0.04264082E+02
1000-4000K	0.11314095E+02	0.05014414E-01	-0.05350444E-05	-0.02825309E-08	0.05403279E-12	0.05181211E+06	-0.03062434E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

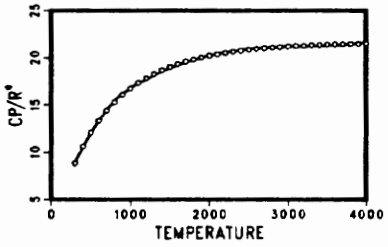
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

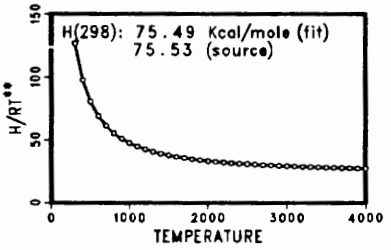
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

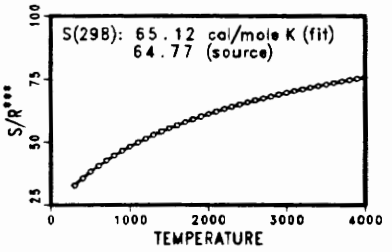
Species: H2CCCCH2 BUTATRIENE D2H GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03849007E+02	0.01713169E+00	0.16442703E-05	-0.07761590E-07	0.01947859E-10	0.03608372E+06	0.05732120E+02
1000-4000K	0.10620828E+02	0.07199370E-01	-0.06806234E-05	-0.04021185E-08	0.07378498E-12	0.03358797E+06	-0.03193583E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

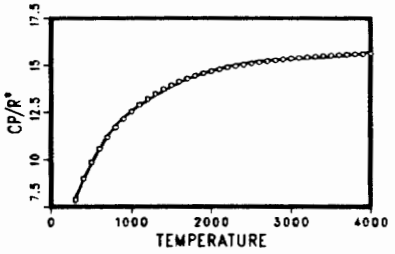
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

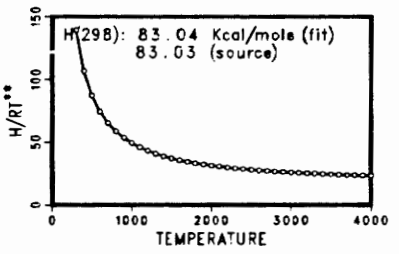
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

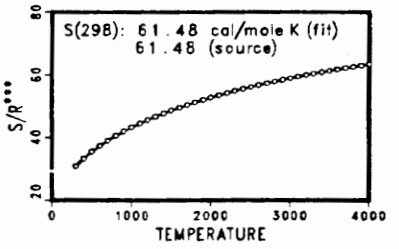
Species: H2CCCH 2-PROPYNYL C2V 2B2 GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04754199E+02	0.11080277E-01	0.02793323E-05	-0.05479212E-07	0.01949629E-10	0.03988883E+06	0.05854549E+01
1000-4000K	0.08831047E+02	0.04357194E-01	-0.04109066E-05	-0.02368723E-08	0.04376520E-12	0.03847419E+06	-0.02177919E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

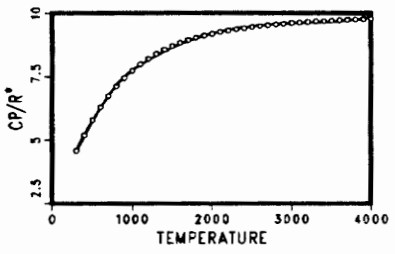
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

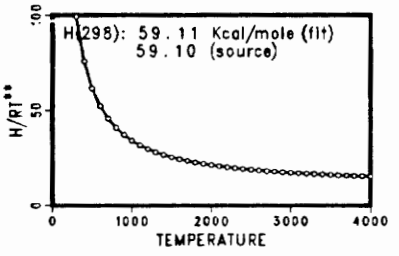
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

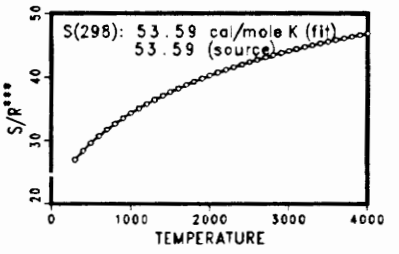
Species: H2CN GAS As of: 4/16/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02851661E+02	0.05695233E-01	0.10711403E-05	-0.16226120E-08	-0.02351108E-11	0.02863782E+06	0.08992751E+02
1000-4000K	0.05209703E+02	0.02969291E-01	-0.02855589E-05	-0.16355504E-09	0.03043259E-12	0.02767711E+06	-0.04444478E+02







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

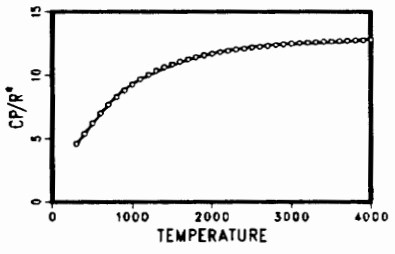
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

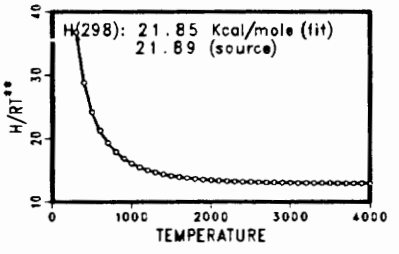
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

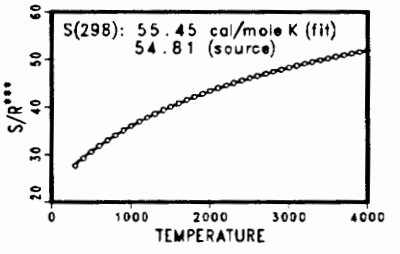
Species: H2CNH GAS As of: 4/16/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02365878E+02	0.06780570E-01	0.02422999E-04	-0.06157824E-08	-0.16150971E-11	0.09971141E+05	0.12307176E+02
1000-4000K	0.05221589E+02	0.04748525E-01	-0.04179158E-05	-0.02606612E-08	0.04703140E-12	0.08657219E+05	-0.04500776E+02







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

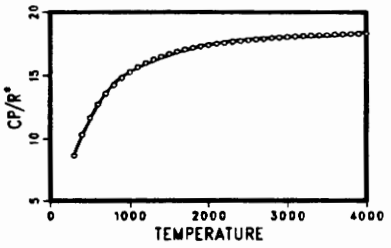
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

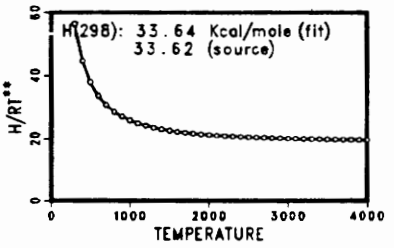
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

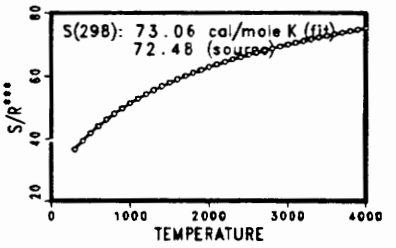
Species: H2CNNO2 GAS As of: 4/16/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03534316E+02	0.01811271E+00	0.02394017E-05	-0.10800240E-07	0.04222725E-10	0.15090057E+05	0.11311378E+02
1000-4000K	0.11407942E+02	0.04564542E-01	-0.04600304E-05	-0.02513538E-08	0.04782211E-12	0.12421422E+05	-0.03165237E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

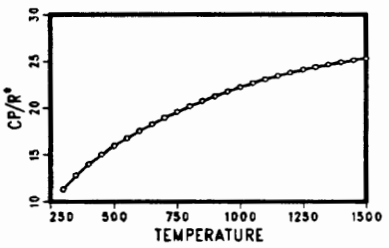
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

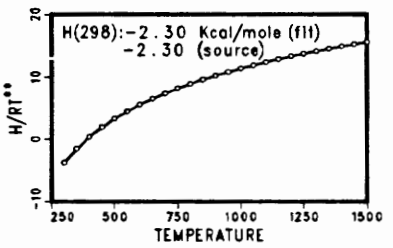
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

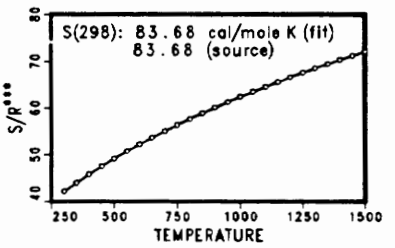
Species: H2GAET ("ET" = C2H5, ETHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.04124020E+01	0.03972971E+00	0.07979140E-04	-0.08059233E-06	0.06040387E-09	-0.02983932E+05	0.02816147E+03
0600-1500K	0.07187273E+02	0.01867211E+00	0.06156157E-05	-0.06027763E-07	0.01797524E-10	-0.04232757E+05	-0.04686699E+02







Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

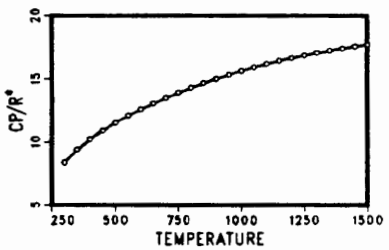
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

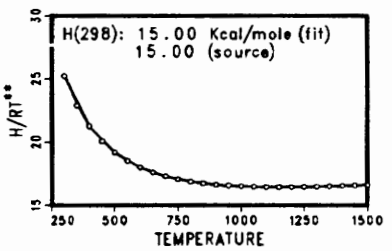
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

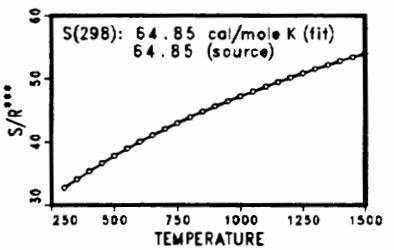
Species: H2GAME ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.05251130E+01	0.02904695E+00	0.04844148E-04	-0.06097646E-06	0.04672763E-09	0.06158712E+05	0.02122148E+03
0600-1500K	0.05831604E+02	0.12228715E-01	0.03033669E-05	-0.03956941E-07	0.12254516E-11	0.05189255E+05	-0.04446614E+02







Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

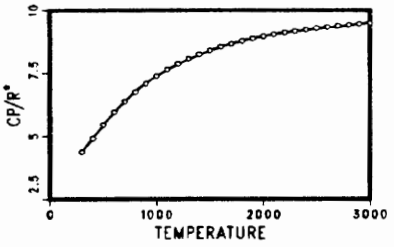
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

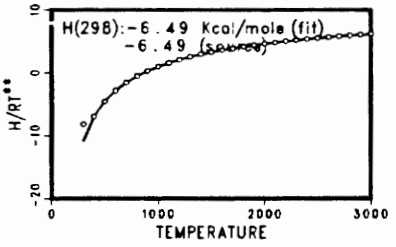
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

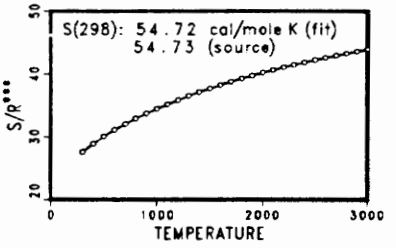
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: H2NF FLUOROAMMONIA GAS As of: 4/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02597862E+02	0.05882104E-01	0.04938351E-05	-0.01948600E-07	0.03634002E-11	-0.04301253E+05	0.10982895E+02
1000-3000K	0.04143658E+02	0.03805135E-01	-0.02771153E-05	-0.03589717E-08	0.07589549E-12	-0.04891486E+05	0.02309362E+02







Source: SNLL FIT TO BAC-MP4 DATA

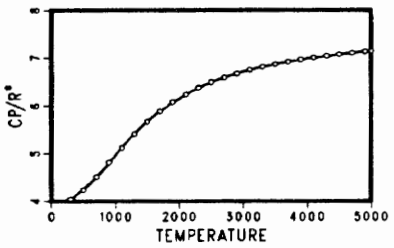
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

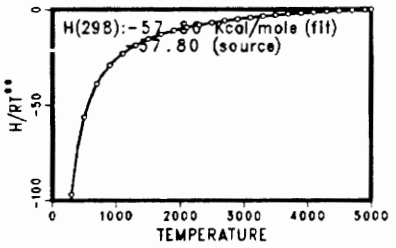
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

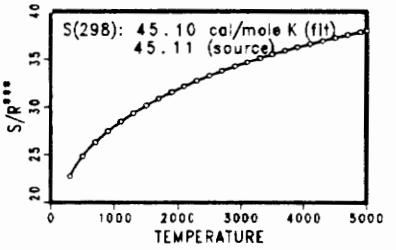
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: H2O WATER GAS As of: 2/03/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03386842E+02	0.03474982E-01	-0.06354696E-04	0.06968581E-07	-0.02506588E-10	-0.03020811E+06	0.02590232E+02
1000-5000K	0.02672145E+02	0.03056293E-01	-0.08730260E-05	0.12009964E-09	-0.06391618E-13	-0.02989921E+06	0.06862817E+02







Source: SNLL FIT TO JANAF TABLES

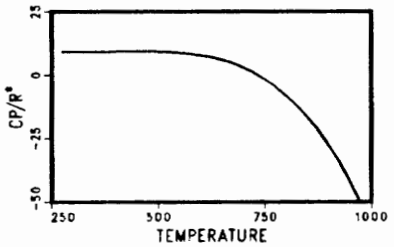
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

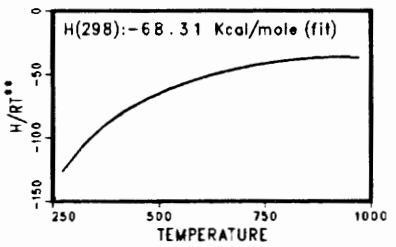
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

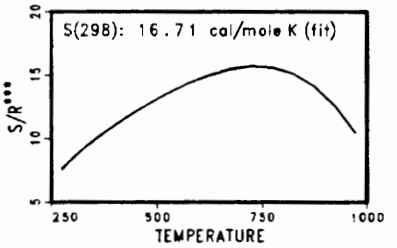
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: H2O(L) WATER LIQUID As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0273-1000K	0.12712782E+02	-0.01766279E+00	-0.02255666E-03	0.02082090E-05	-0.02407861E-08	-0.03748320E+06	-0.05911534E+03
1000-1000K	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00







Source: NASA FIT TO NASA LEWIS DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

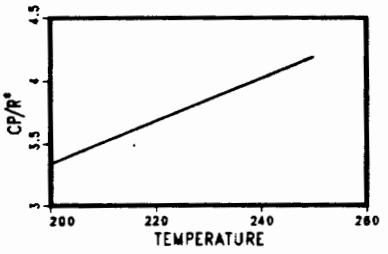
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

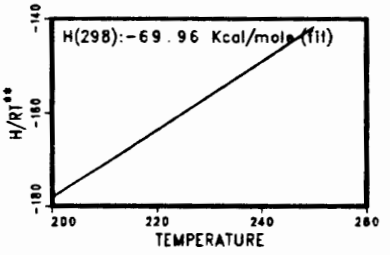
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

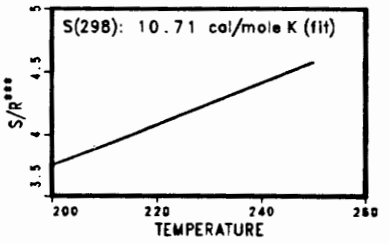
Species: H2O(S) WATER SOLID As of: 12/01/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0200-1000K	-0.03926933E+00	0.01692042E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	-0.03594958E+06	0.05693378E+01
1000-0273K	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00







Source: NASA FIT TO NASA LEWIS DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

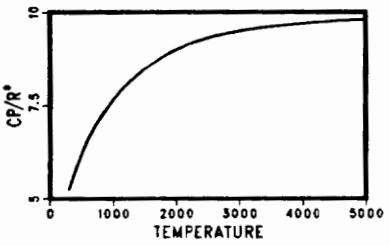
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

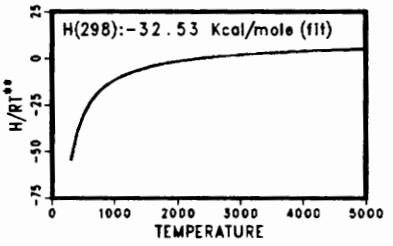
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

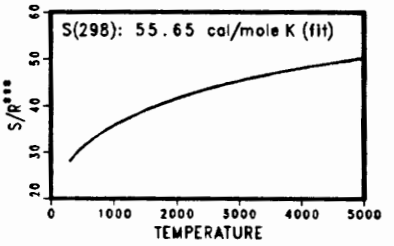
Species: H2O2 HYDROGEN PEROXIDE GAS As of: 12/01/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03388753E+02	0.06569226E-01	-0.14850125E-06	-0.04625805E-07	0.02471514E-10	-0.01766314E+06	0.06785363E+02
1000-5000K	0.04573167E+02	0.04336136E-01	-0.14746888E-05	0.02348903E-08	-0.14316536E-13	-0.01800696E+06	0.05011369E+01







Source: NASA FIT TO NASA-LEWIS DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

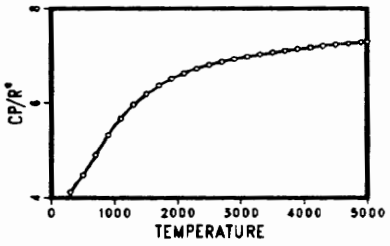
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

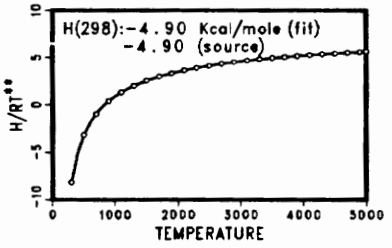
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

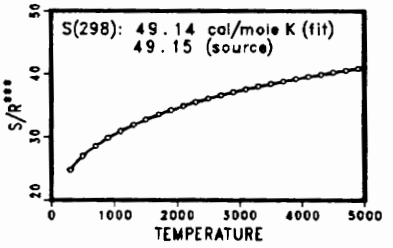
Species: H2S HYDROGEN SULFIDE GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03071029E+02	0.05578261E-01	-0.10309669E-04	0.12019529E-07	-0.04838369E-10	-0.03559826E+05	0.05935226E+02
1000-5000K	0.02883147E+02	0.03827835E-01	-0.14233978E-05	0.02497998E-08	-0.16602733E-13	-0.03480742E+05	0.07258161E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

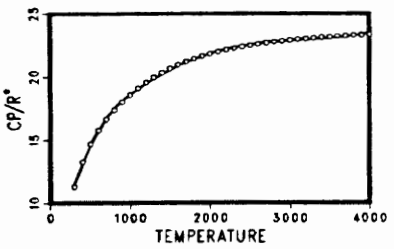
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

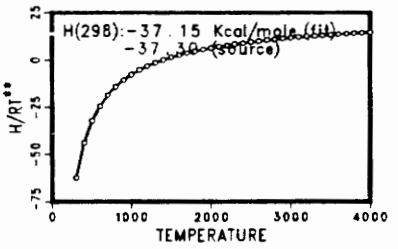
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

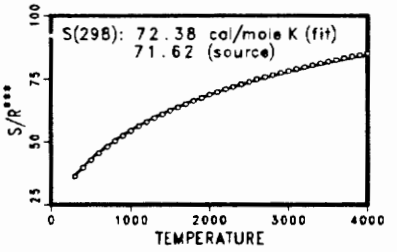
Species: H2SI(NH2)2 DIAMINOSILANE GAS As of: 2/27/90

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.05615307E+02	0.02079854E+00	-0.09999531E-05	-0.12885246E-07	0.06091865E-10	-0.02126283E+06	-0.16156578E+01
1000-4000K	0.13021791E+02	0.06465444E-01	-0.05816746E-05	-0.03484493E-08	0.06340675E-12	-0.02357070E+06	-0.04132569E+03







Source: SNL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

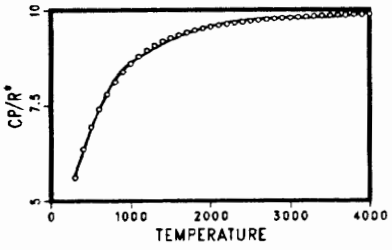
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

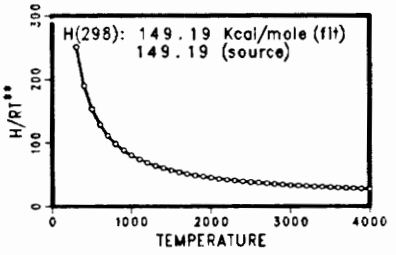
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

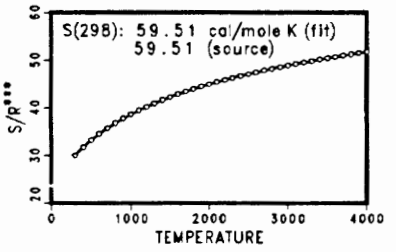
Species: H2SIN GAS As of: 2/27/90

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03549344E+02	0.07311004E-01	0.03249025E-05	-0.03682945E-07	0.11215113E-11	0.07370656E+06	0.07565328E+02
1000-4000K	0.06826533E+02	0.02125460E-01	-0.02343131E-05	-0.11663394E-09	0.02277273E-12	0.07253672E+06	-0.10521624E+02







Source: SNL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

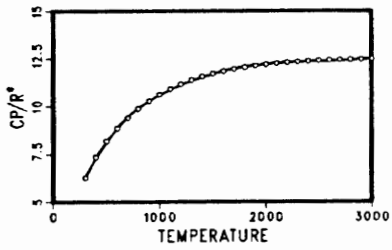
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

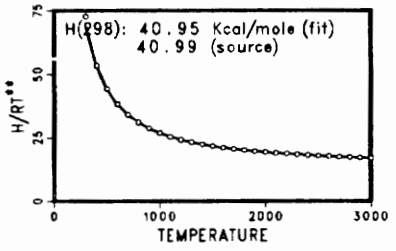
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

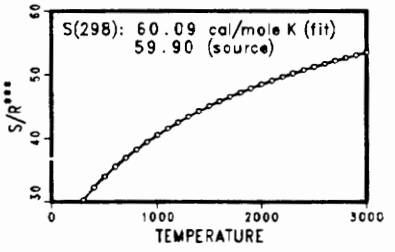
Species: H2SINH GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02822195E+02	0.12455182E-01	-0.08350819E-05	-0.07411813E-07	0.03579019E-10	0.01923616E+06	0.10547831E+02
1000-3000K	0.06588295E+02	0.04903194E-01	-0.04944719E-05	-0.05014630E-08	0.11394698E-12	0.01809794E+06	-0.09522970E+02







Source: SNLL FIT TO BAC-MP4 DATA

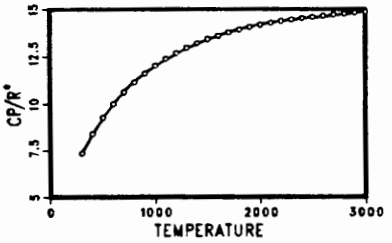
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

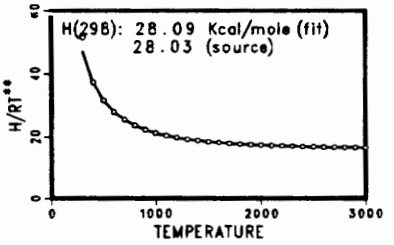
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

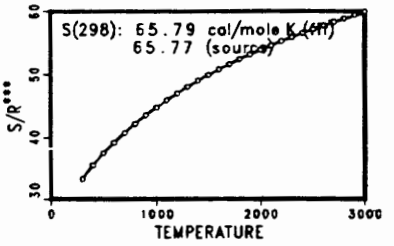
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: H2SINH2 AMINOSILYL GAS As of: 4/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04053222E+02	0.11822311E-01	-0.04348128E-05	-0.06225818E-07	0.02798829E-10	0.12419705E+05	0.06562032E+02
1000-3000K	0.07392047E+02	0.05476841E-01	-0.04453276E-05	-0.05236661E-08	0.11383899E-12	0.11368581E+05	-0.11380495E+02







Source: SNLL FIT TO BAC-MP4 DATA

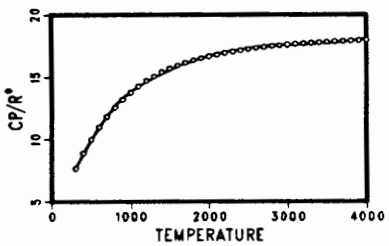
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

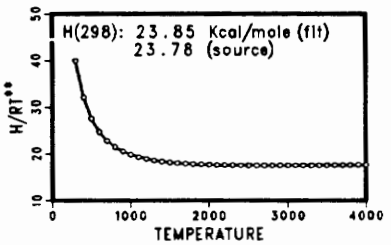
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

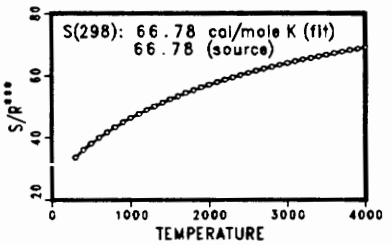
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: H2SINH3 SILYLENE-AMMONIA TRANS STATE GAS As of: 12/13/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04269729E+02	0.11252245E-01	0.01951721E-04	-0.03578372E-07	-0.08372202E-12	0.10222041E+05	0.05876735E+02
1000-4000K	0.08711392E+02	0.05909106E-01	-0.05436615E-05	-0.03248350E-08	0.05960257E-12	0.08441694E+05	-0.01933470E+03







Source: SNLL FIT TO BAC-MP4 DATA

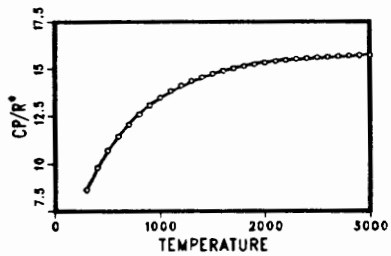
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

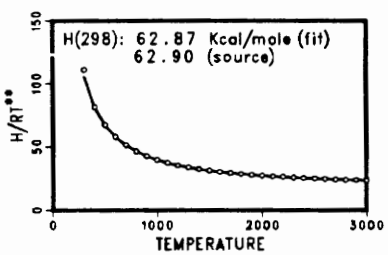
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

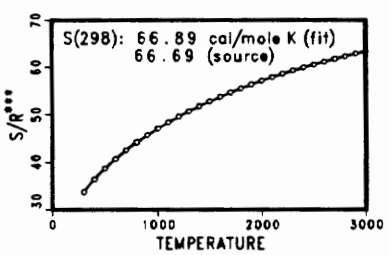
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: H2SISIH2 DISILENE GAS As of: 4/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.05133186E+02	0.12528548E-01	-0.04620421E-05	-0.06606075E-07	0.02864344E-10	0.02956915E+06	0.07605133E+01
1000-3000K	0.08986817E+02	0.05405047E-01	-0.05214021E-05	-0.05313742E-08	0.11887266E-12	0.02832747E+06	-0.02004478E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

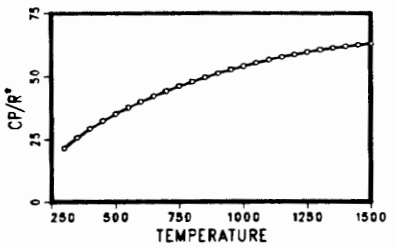
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

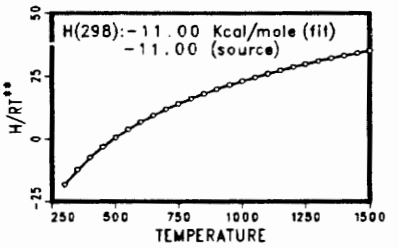
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

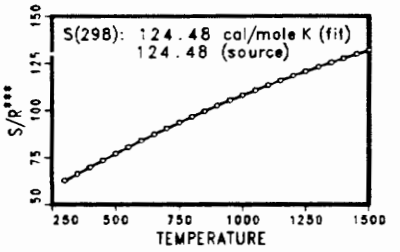
Species: H3ASGAET3 ("ET" = C2H5, ETHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	-0.08974745E+02	0.10905161E+00	0.02811457E-03	-0.02195513E-05	0.15997339E-09	-0.07592761E+05	0.08165459E+03
0600-1500K	0.08508501E+02	0.05632369E+00	0.02524140E-04	-0.01861451E-06	0.05372402E-10	-0.10855169E+05	-0.03399857E+02







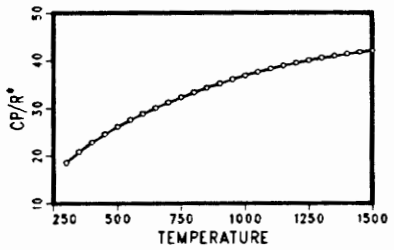
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

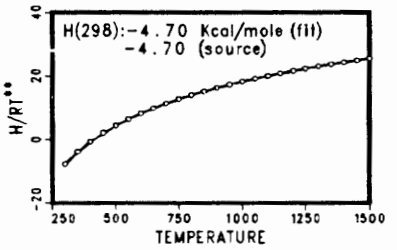
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

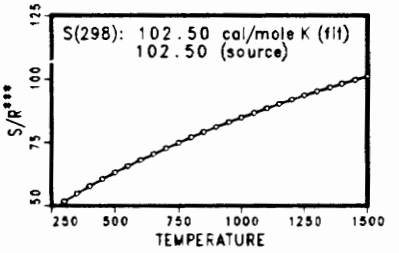
Species: H3ASGAME3 ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.12671606E+01	0.06214586E+00	0.13856307E-04	-0.12200444E-06	0.08982019E-09	-0.05425619E+05	0.02613306E+03
0600-1500K	0.11254990E+02	0.03159752E+00	0.11779036E-05	-0.10133524E-07	0.02947355E-10	-0.07280344E+05	-0.02238729E+03







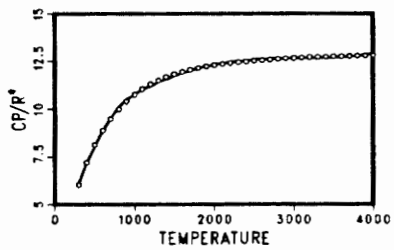
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

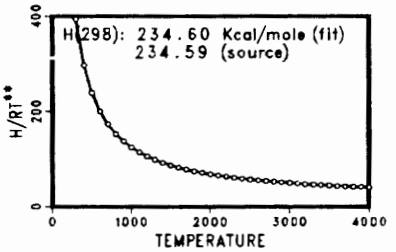
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

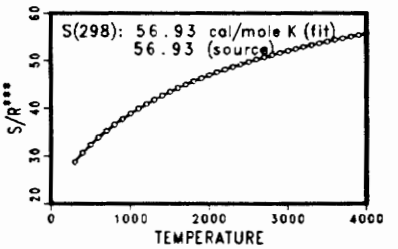
Species: H3SIN SILYLNITRENE GAS As of: 2/27/90

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02790628E+02	0.11345662E-01	0.08321879E-05	-0.05845045E-07	0.01685969E-10	0.11673571E+06	0.09384630E+02
1000-4000K	0.07964213E+02	0.03355633E-01	-0.03579695E-05	-0.01889818E-08	0.03650912E-12	0.11486972E+06	-0.01924110E+03





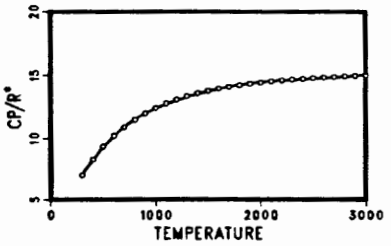


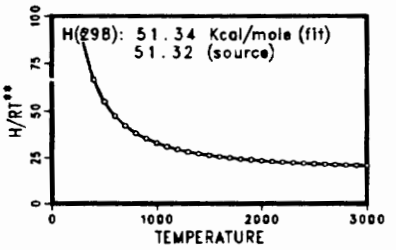
Source:

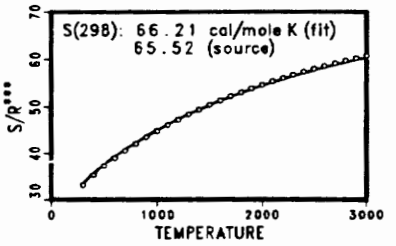
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: H3SINH SILYLAMIDOGEN GAS As of: 4/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02778390E+02	0.15107111E-01	-0.06734260E-05	-0.08928515E-07	0.04115347E-10	0.02435913E+06	0.13093859E+02
1000-3000K	0.07697340E+02	0.05657943E-01	-0.05209306E-05	-0.05617966E-08	0.12635020E-12	0.02282005E+06	-0.13303793E+02







Source: SNLL FIT TO BAC-MP4 DATA

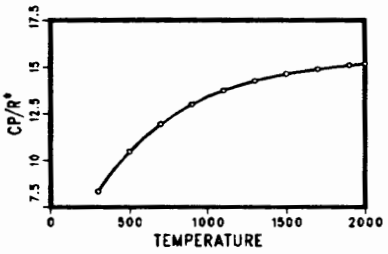
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

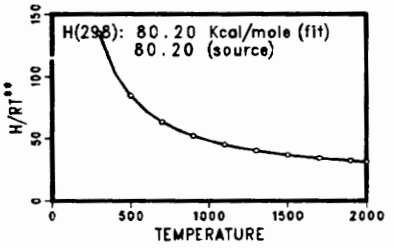
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

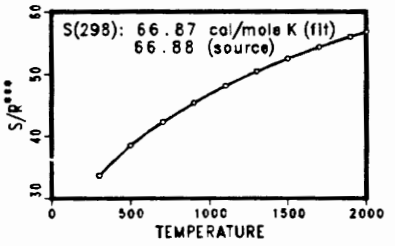
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: H3SISIH GAS As of: 9/05/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02774192E+02	0.02555302E+00	-0.02883836E-03	0.02000737E-06	-0.06100616E-10	0.03861801E+06	0.11350098E+02
1000-2000K	0.07778291E+02	0.07255418E-01	-0.08123265E-05	-0.11682818E-08	0.03425139E-11	0.03742600E+06	-0.13484629E+02







Source: SNLL FIT TO DATA GENERATED USING VIBRATIONAL FREQUENCIES

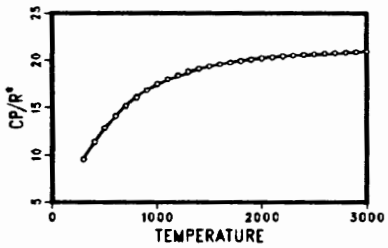
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

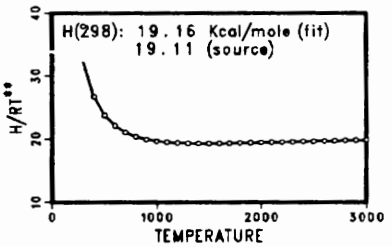
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

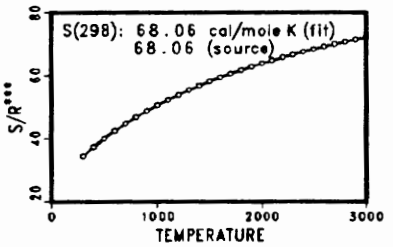
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: H3SISIH3 DISILANE GAS As of: 4/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03898289E+02	0.01977415E+00	0.01791014E-05	-0.10331682E-07	0.03931698E-10	0.07621719E+05	0.06227022E+02
1000-3000K	0.10682729E+02	0.08221416E-01	-0.08096035E-05	-0.08337975E-08	0.01908205E-11	0.05316920E+05	-0.03082188E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

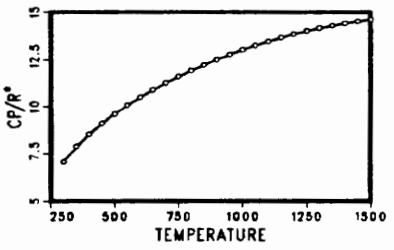
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

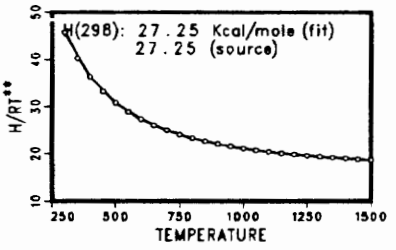
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

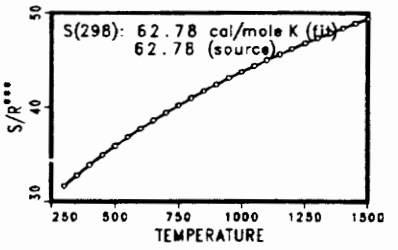
Species: HALME ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.11187894E+01	0.02180038E+00	0.04120785E-04	-0.04366690E-06	0.03273825E-09	0.12447363E+05	0.01886107E+03
0600-1500K	0.04812273E+02	0.10296448E-01	0.02582807E-05	-0.03323596E-07	0.09884584E-11	0.11766730E+05	0.09557062E+01







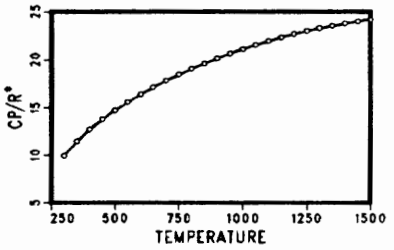
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

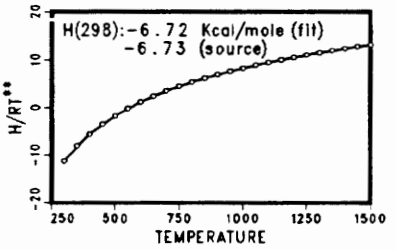
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

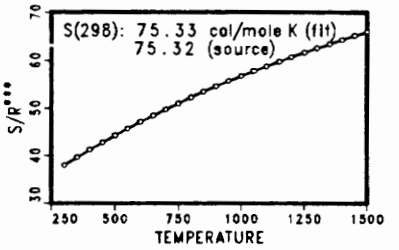
Species: HALME2 ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	-0.14942614E+01	0.04158567E+00	0.08686772E-04	-0.08604142E-06	0.06447652E-09	-0.04722516E+05	0.03427724E+03
0600-1500K	0.05705171E+02	0.01924317E+00	0.06377855E-05	-0.06346800E-07	0.01896799E-10	-0.06049864E+05	-0.06331378E+01







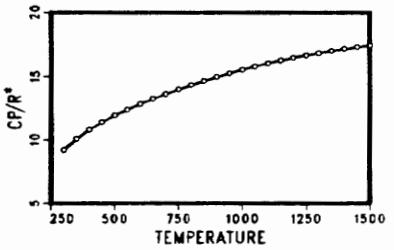
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

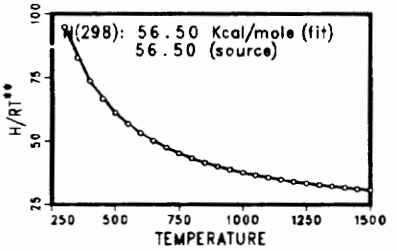
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

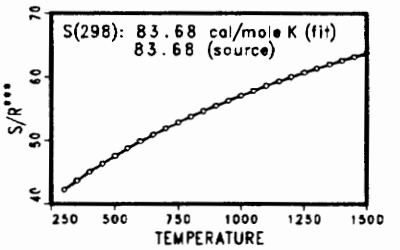
Species: HASALME ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.02544858E+02	0.02465794E+00	0.03677807E-04	-0.05008893E-06	0.03848383E-09	0.02663010E+06	0.02046858E+03
0600-1500K	0.06956538E+02	0.10612781E-01	0.02440153E-05	-0.03297737E-07	0.10200039E-11	0.02582505E+06	-0.08625792E+01







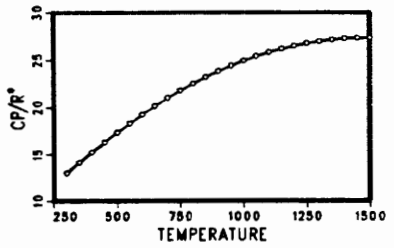
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

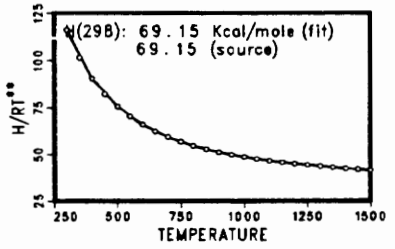
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

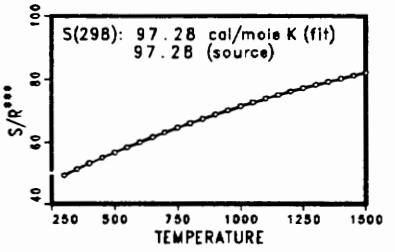
Species: HASGAET ("ET" = C2H5, ETHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.05642723E+02	0.02296738E+00	0.10948674E-04	-0.02449038E-06	0.09602700E-10	0.03204717E+06	0.09675533E+02
0600-1500K	0.06336445E+02	0.02340603E+00	0.09066638E-05	-0.07519059E-07	0.01828115E-10	0.03184605E+06	0.05812180E+02







Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

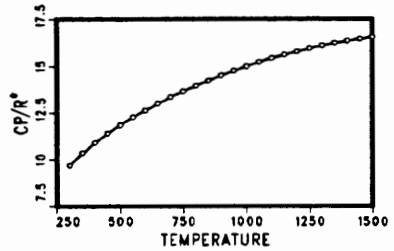
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

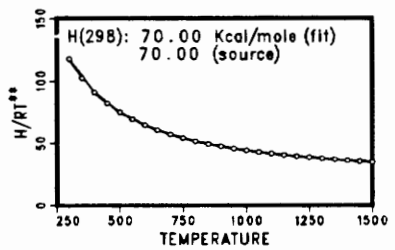
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

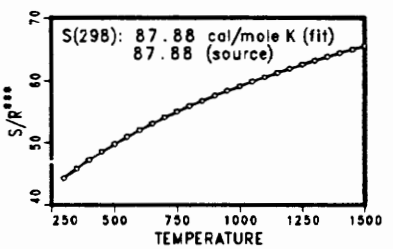
Species: HASGAME ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.04859126E+02	0.01750423E+00	0.02831995E-04	-0.03107936E-06	0.02299468E-09	0.03302941E+06	0.11429521E+02
0600-1500K	0.07507970E+02	0.09277900E-01	0.01891931E-05	-0.02769886E-07	0.07996069E-11	0.03253907E+06	-0.14226081E+01







Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

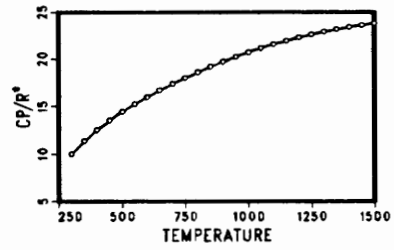
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

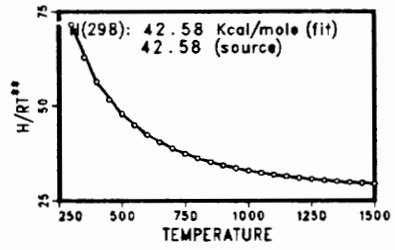
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

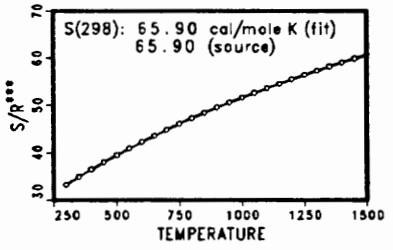
Species: HASME ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	-0.15750948E+00	0.03649094E+00	0.08332939E-04	-0.07234666E-06	0.05330928E-09	0.01989791E+06	0.02335316E+03
0600-1500K	0.05753261E+02	0.01841813E+00	0.07493312E-05	-0.05919916E-07	0.01726246E-10	0.01880057E+06	-0.05360325E+02







Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

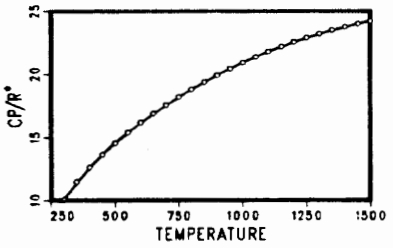
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

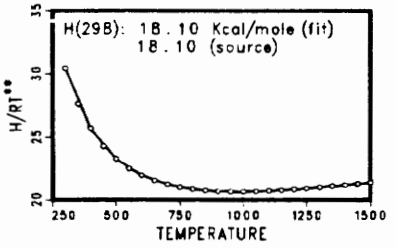
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

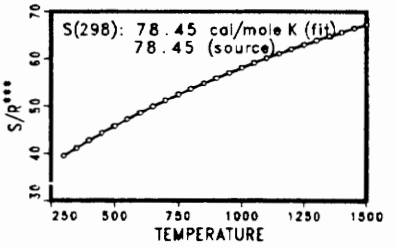
Species: HASME2 ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	-0.02908405E+01	0.03729576E+00	0.08335854E-04	-0.07455611E-06	0.05527881E-09	0.07587765E+05	0.03020451E+03
0600-1500K	0.05850436E+02	0.01841765E+00	0.08066844E-05	-0.05868715E-07	0.01726428E-10	0.06450535E+05	0.03909152E+01







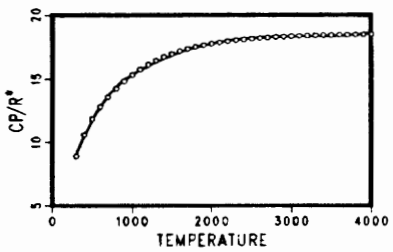
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

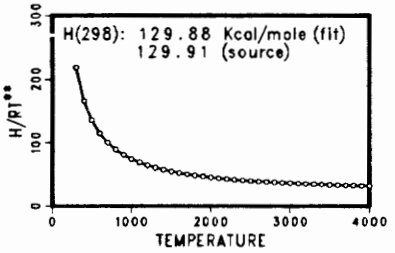
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

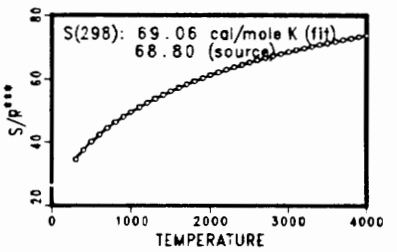
Species: HCCHCCH HCCH CIS GAS As of: 8/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04153881E+02	0.01726287E+00	-0.02389374E-05	-0.10187000E-07	0.04340504E-10	0.06338070E+06	0.06036506E+02
1000-4000K	0.10752738E+02	0.05381153E-01	-0.05549637E-05	-0.03052266E-08	0.05761740E-12	0.06121419E+06	-0.02973025E+03







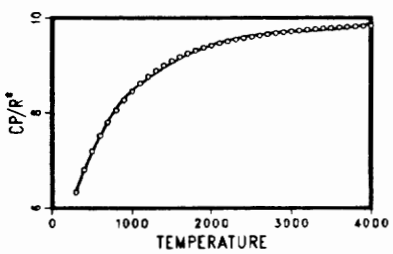
Source: SNLL FIT TO BURCAT DATA

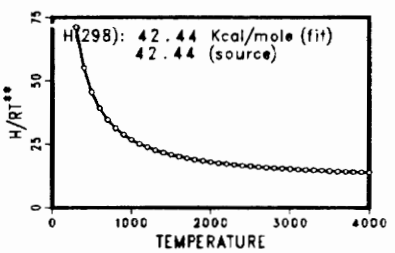
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

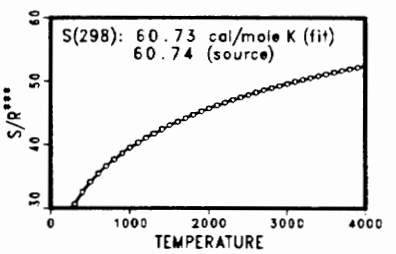
Species: HCCO KETYL GAS As of: 3/23/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.05047965E+02	0.04453478E-01	0.02268282E-05	-0.14820945E-08	0.02250741E-11	0.01965891E+06	0.04818439E+01
1000-4000K	0.06758073E+02	0.02000400E-01	-0.02027607E-05	-0.10411318E-09	0.01965164E-12	0.01901513E+06	-0.09071262E+02







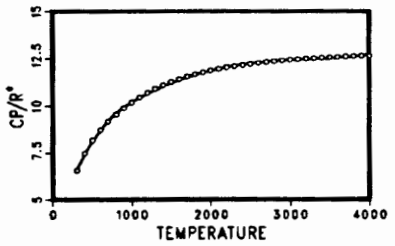
Source: SNLL FIT TO BAC-MP4 DATA

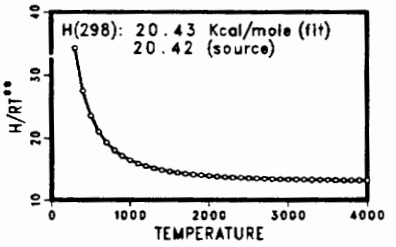
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

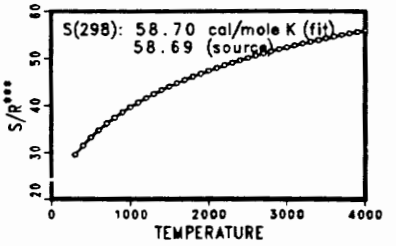
Species: HCCOH ETHYNOL GAS As of: 3/23/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03899465E+02	0.09701075E-01	-0.03119309E-05	-0.05537732E-07	0.02465732E-10	0.08701190E+05	0.04491874E+02
1000-4000K	0.07328324E+02	0.03336416E-01	-0.03024705E-05	-0.01781106E-08	0.03245168E-12	0.07598258E+05	-0.14012140E+02







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

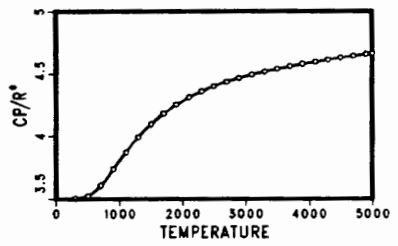
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

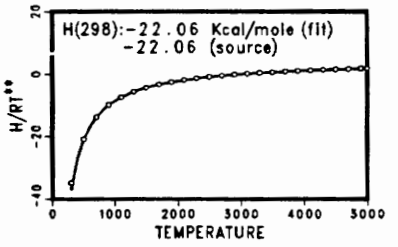
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

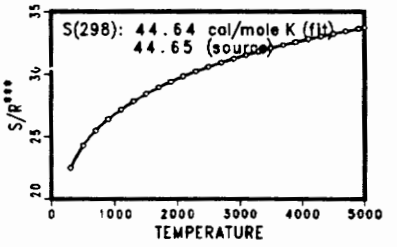
Species: HCL HYDROGEN CHLORIDE GAS As of: 4/21/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03338534E+02	0.12682066E-02	-0.03666916E-04	0.04703992E-07	-0.01836011E-10	-0.12131511E+05	0.03193555E+02
1000-5000K	0.02755335E+02	0.14735811E-02	-0.04971254E-05	0.08108658E-09	-0.05072063E-13	-0.11918058E+05	0.06515116E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

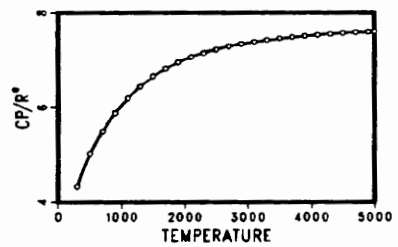
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

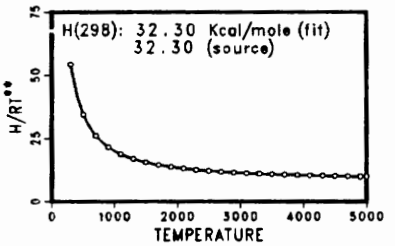
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

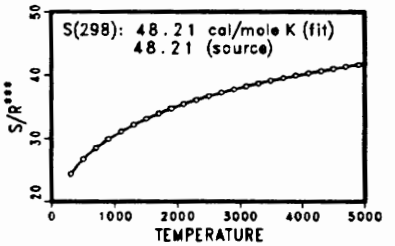
Species: HCN HYDROGEN CYANIDE GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02490462E+02	0.08611280E-01	-0.10310342E-04	0.07481498E-07	-0.02229109E-10	0.15208344E+05	0.07904981E+02
1000-5000K	0.03650077E+02	0.03460998E-01	-0.12742788E-05	0.02217655E-08	-0.14771774E-13	0.14983916E+05	0.02393220E+02







Source: SNLL FIT TO JANAF TABLES (CHN)

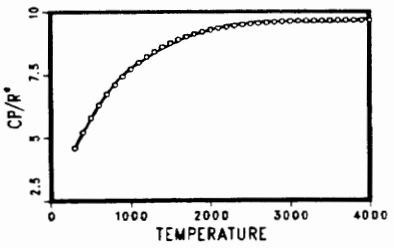
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

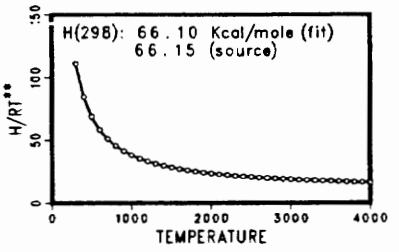
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

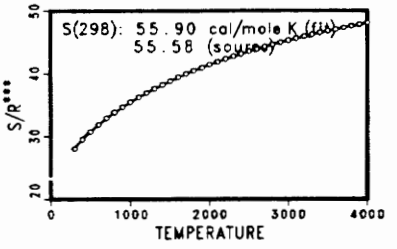
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: HCNH GAS As of: 4/16/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02759456E+02	0.06103386E-01	0.07713149E-05	-0.02063093E-07	0.01931919E-11	0.03217247E+06	0.10574895E+02
1000-4000K	0.04923292E+02	0.03332897E-01	-0.03370896E-05	-0.01901619E-08	0.03531825E-12	0.03132669E+06	-0.16325088E+01







Source: SNLL FIT TO BAC-MP4 DATA

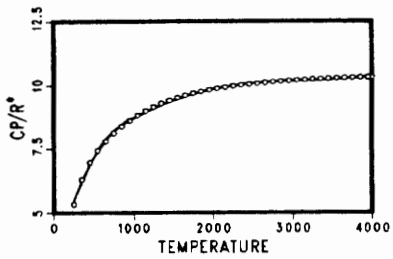
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

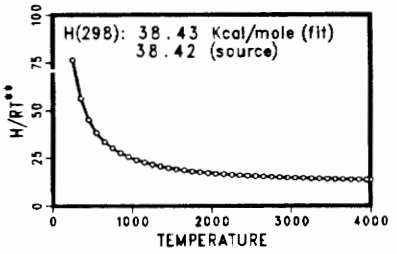
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

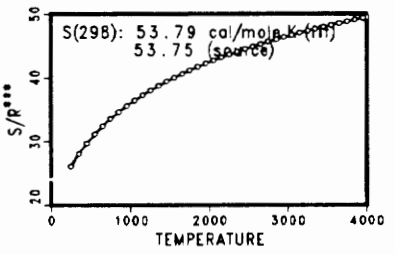
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: HCNO GAS As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0250-1000K	0.03184858E+02	0.09752316E-01	-0.12802028E-05	-0.06163104E-07	0.03226275E-10	0.01797907E+06	0.06123843E+02
1000-4000K	0.06692412E+02	0.02368360E-01	-0.02371510E-05	-0.12755033E-09	0.02407137E-12	0.01694736E+06	-0.12454345E+02







Source: SNLL FIT TO BAC-MP4 DATA

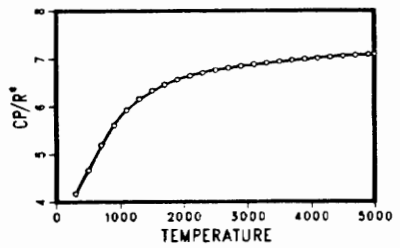
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

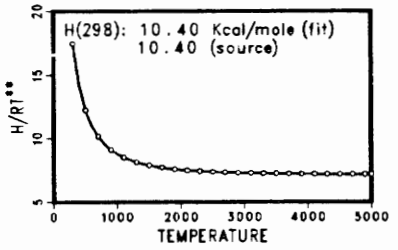
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

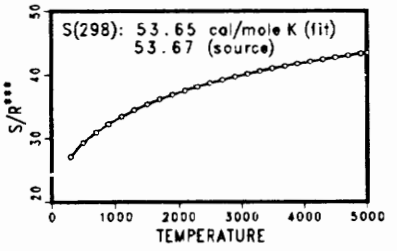
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: HCO FORMYL GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02898329E+02	0.06199146E-01	-0.09623084E-04	0.10898249E-07	-0.04574885E-10	0.04159922E+05	0.08983614E+02
1000-5000K	0.03557271E+02	0.03345572E-01	-0.13350060E-05	0.02470572E-08	-0.01713850E-12	0.03916324E+05	0.05552299E+02







Source: SNLL FIT TO JANAF TABLES (CHO)

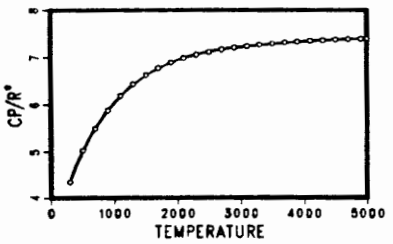
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

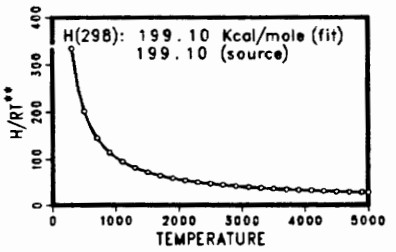
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

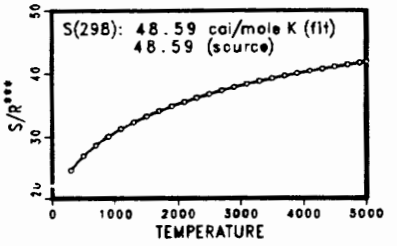
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: HCO+ FORMYL, UNIPOSITIVE ION GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02496483E+02	0.08690658E-01	-0.10604453E-04	0.07882791E-07	-0.02418385E-10	0.09915097E+06	0.08048177E+02
1000-5000K	0.03692074E+02	0.03454732E-01	-0.13165244E-05	0.02323551E-08	-0.15541321E-13	0.09890941E+06	0.02330722E+02







Source: SNLL FIT TO JANAF TABLES (CHO+)

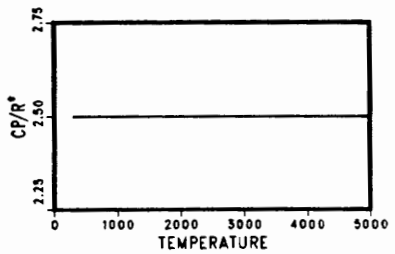
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

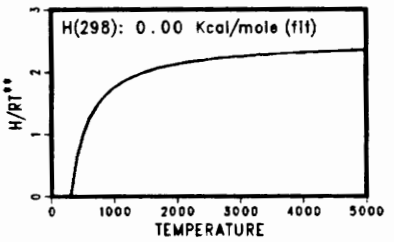
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

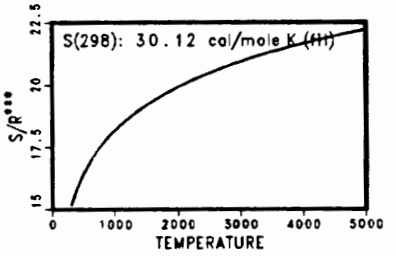
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: HE HELIUM, MONATOMIC (REF ST) GAS As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02500000E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	-0.07453750E+04	0.09153488E+01
1000-5000K	0.02500000E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	-0.07453750E+04	0.09153489E+01







Source: NASA FIT TO NASA-LEWIS DATA

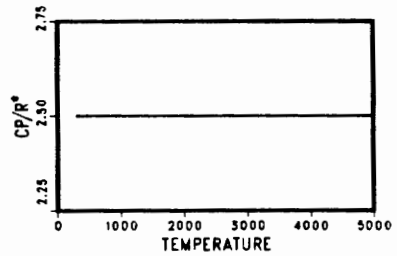
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

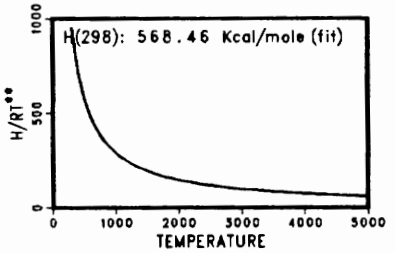
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

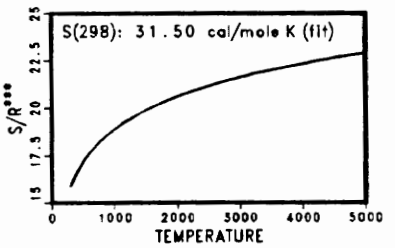
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: HE+ HELIUM, UNIPOSITIVE ION GAS As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02500000E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.02853426E+07	0.16084046E+01
1000-5000K	0.02500000E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.02853426E+07	0.16084045E+01







Source: NASA FIT TO NASA-LEWIS DATA

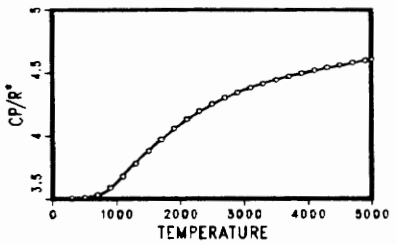
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

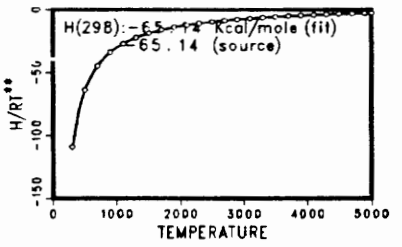
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

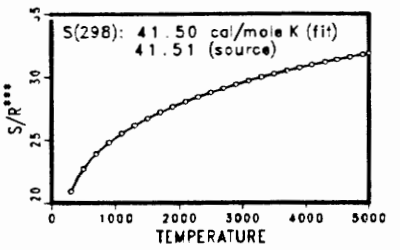
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: HF HYDROGEN FLUORIDE GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03431841E+02	0.04404165E-02	-0.08828452E-05	0.06574516E-08	-0.02055909E-12	-0.03381977E+06	0.12382699E+01
1000-5000K	0.02956767E+02	0.07721015E-02	-0.09899834E-06	-0.04993520E-10	0.14293306E-14	-0.03361061E+06	0.04011673E+02







Source: SNLL FIT TO JANAF TABLES

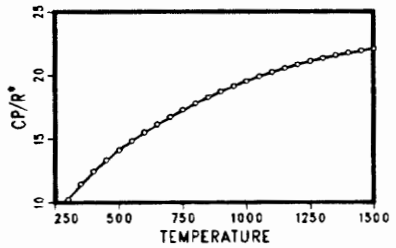
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

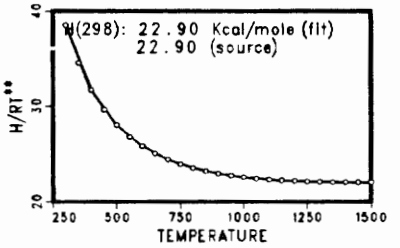
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

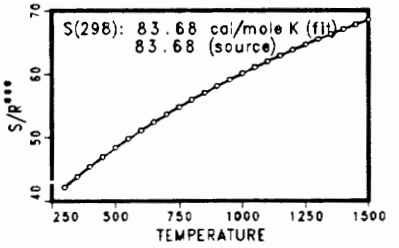
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: HGAET ("ET" = C2H5, ETHYL) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.11632838E+01	0.03282212E+00	0.06765717E-04	-0.06509541E-06	0.04835806E-09	0.09767174E+05	0.02588269E+03
0600-1500K	0.06580151E+02	0.16101323E-01	0.05009545E-05	-0.05185148E-07	0.15240853E-11	0.08765131E+05	-0.04046067E+01







Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

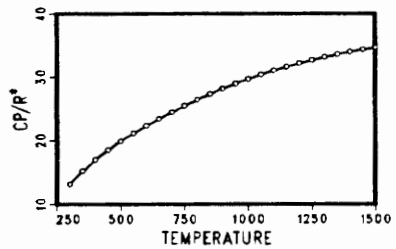
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

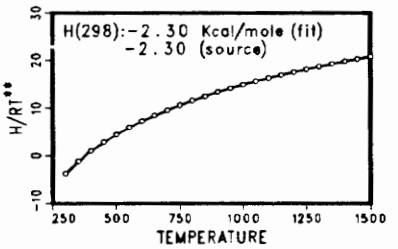
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

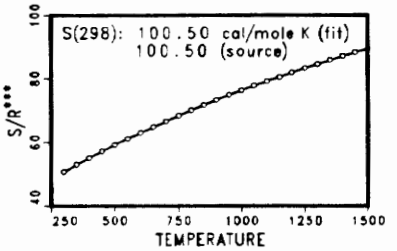
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: HGAET2 ("ET" = C2H5, ETHYL) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	-0.14865759E+01	0.05217640E+00	0.13563420E-04	-0.10119820E-06	0.07319853E-09	-0.02985242E+05	0.04364749E+03
0600-1500K	0.06511306E+02	0.02819753E+00	0.14187506E-05	-0.09000947E-07	0.02572894E-10	-0.04482180E+05	0.04709021E+02







Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

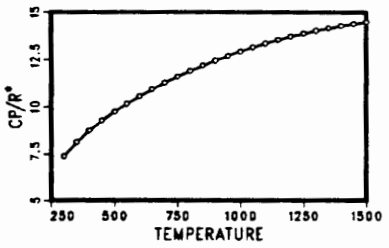
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

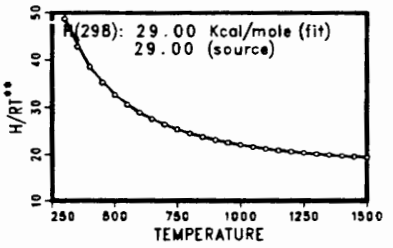
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

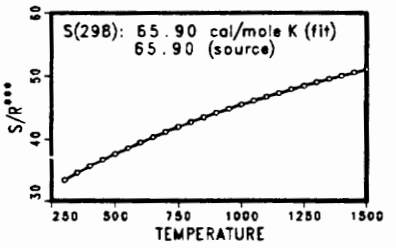
Species: HGAME ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.01784749E+02	0.02058861E+00	0.03548509E-04	-0.04111927E-06	0.03108978E-09	0.13184225E+05	0.01700701E+03
0600-1500K	0.05318279E+02	0.09490931E-01	0.02277164E-05	-0.03005070E-07	0.09037830E-11	0.12535338E+05	-0.10657105E+00







Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

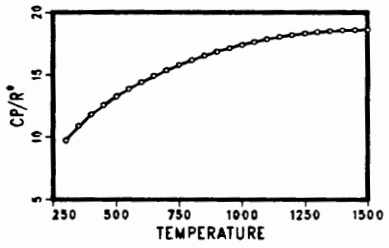
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

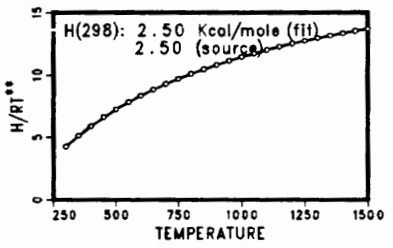
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

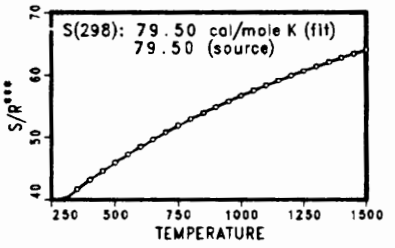
Species: HGAME2 ("ME" = CH3,METHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	0.09039155E+01	0.03264779E+00	0.05389243E-04	-0.06814504E-06	0.05150323E-09	-0.03978242E+04	0.02539304E+03
0600-1500K	0.06759397E+02	0.14261030E-01	-0.11740239E-06	-0.05001401E-07	0.15027851E-11	-0.14732646E+04	-0.02967135E+02







Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

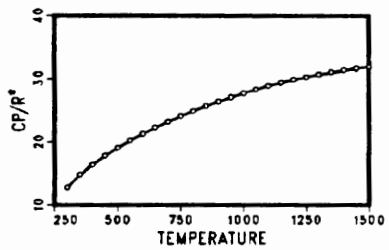
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

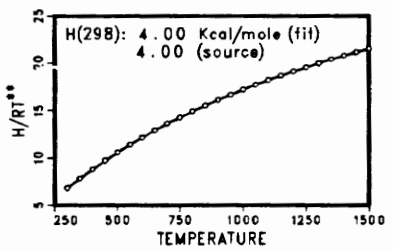
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

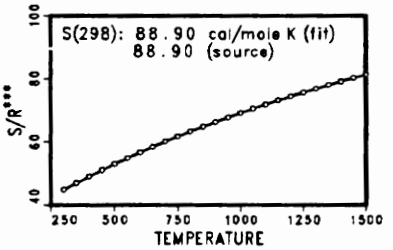
Species: HMEGAET ("ME"=CH3,METHYL; "ET"=C2H5,ETHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	-0.02079142E+02	0.05373076E+00	0.11810364E-04	-0.10998548E-06	0.08189554E-09	0.03216961E+04	0.04086070E+03
0600-1500K	0.07025463E+02	0.02564787E+00	0.09619100E-05	-0.08403699E-07	0.02488960E-10	-0.13613768E+04	-0.03319484E+02







Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

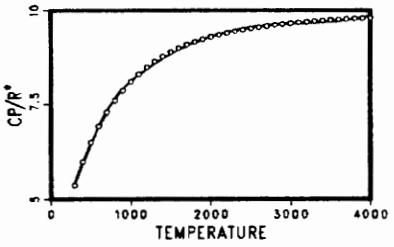
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

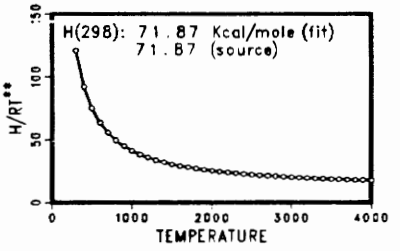
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

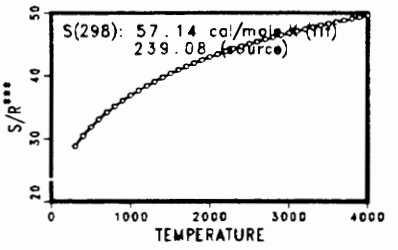
Species: HN3 HYDRAZOIC ACID GAS As of: 8/26/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03621003E+02	0.06030785E-01	0.04054460E-05	-0.02545270E-07	0.06174280E-11	0.03482373E+06	0.06333769E+02
1000-4000K	0.06023015E+02	0.02454362E-01	-0.02404279E-05	-0.13229726E-09	0.02474146E-12	0.03394051E+06	-0.07015537E+02







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

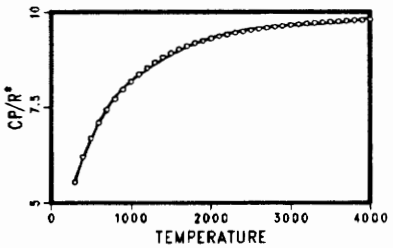
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

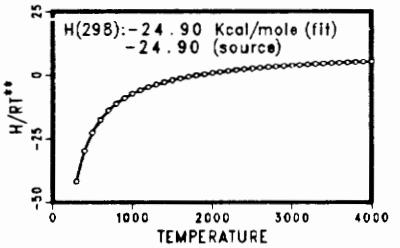
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

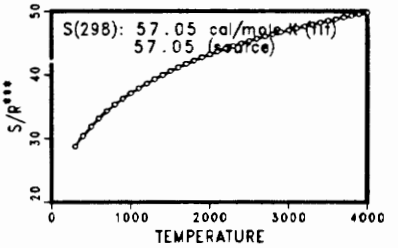
Species: HNCO ISOCYANIC ACID GAS As of: 3/12/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03694059E+02	0.06657236E-01	-0.05054468E-06	-0.03473411E-07	0.13605694E-11	-0.13919758E+05	0.05712742E+02
1000-4000K	0.06211867E+02	0.02297137E-01	-0.02216128E-05	-0.12220438E-09	0.02272406E-12	-0.14770725E+05	-0.08016633E+02







Source: FIT TO BAC-MP4 DATA WITH H298=-24.9 PER MILLER

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

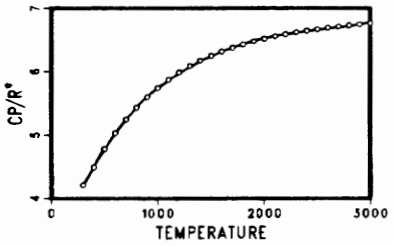
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

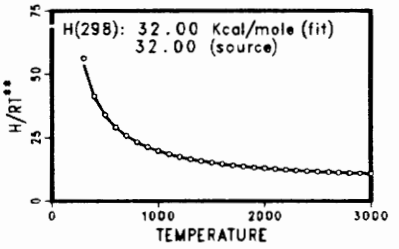
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

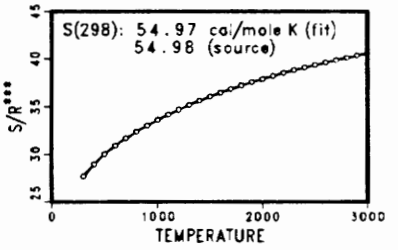
Species: HNF MONOFLUOROAMIDOGEN GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03249760E+02	0.03261817E-01	0.04355642E-06	-0.11002765E-08	0.02926757E-11	0.14991264E+05	0.08187434E+02
1000-3000K	0.04133219E+02	0.01912056E-01	-0.16253301E-06	-0.01726461E-08	0.03743691E-12	0.14670521E+05	0.03292122E+02







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

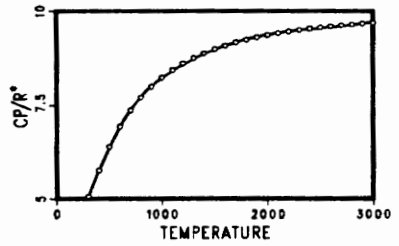
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

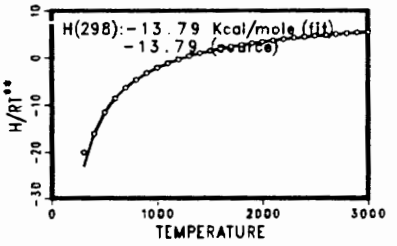
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

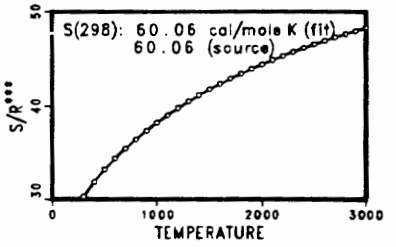
Species: HNF2 DIFLUOROAMMONIA GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02572812E+02	0.08762144E-01	-0.02326921E-05	-0.05000826E-07	0.02143837E-10	-0.08086760E+05	0.13006810E+02
1000-3000K	0.05704866E+02	0.03049897E-01	-0.02826802E-05	-0.02923184E-08	0.06551055E-12	-0.09107488E+05	-0.03941331E+02







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

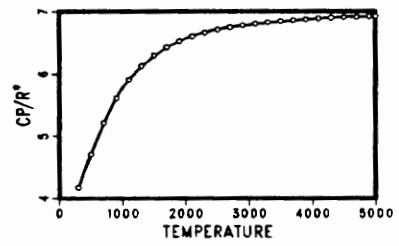
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

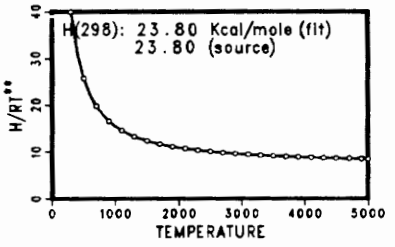
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

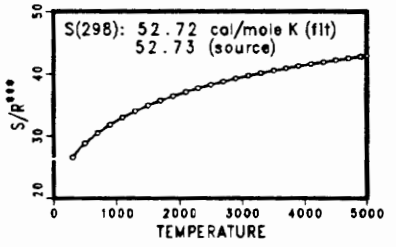
Species: HNO NITROXYL GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02784402E+02	0.06609646E-01	-0.09300223E-04	0.09437980E-07	-0.03753146E-10	0.10918779E+05	0.09035629E+02
1000-5000K	0.03615144E+02	0.03212485E-01	-0.12603370E-05	0.02267297E-08	-0.15362358E-13	0.10661911E+05	0.04810263E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

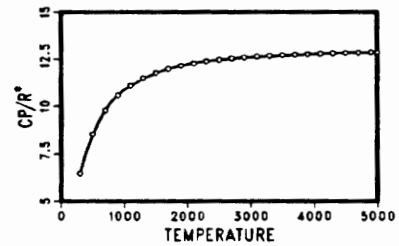
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

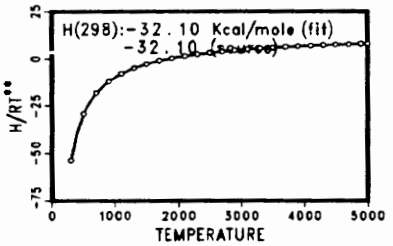
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

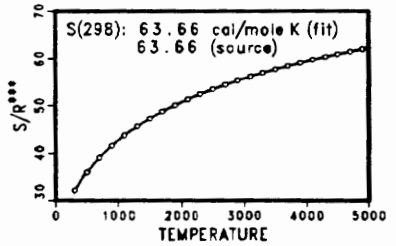
Species: HNO3 NITRIC ACID GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.13531850E+01	0.02220024E+00	-0.01978811E-03	0.08773908E-07	-0.16583844E-11	-0.01738562E+06	0.01851868E+03
1000-5000K	0.07003844E+02	0.05811493E-01	-0.02333788E-04	0.04288814E-08	-0.02959385E-12	-0.01889952E+06	-0.10478628E+02







Source: SNLL FIT TO JANAF TABLES

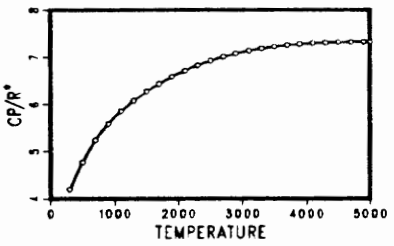
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

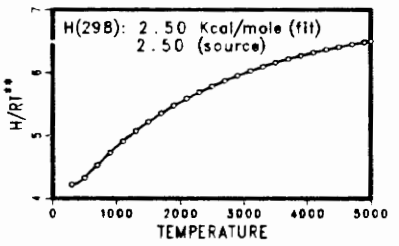
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

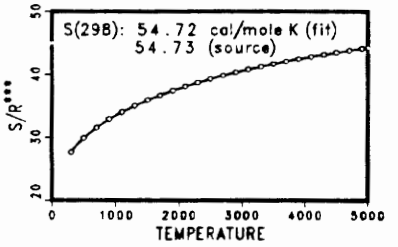
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: HO2 HYDROPEROXYL GAS As of: 2/03/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02979963E+02	0.04996697E-01	-0.03790997E-04	0.02354192E-07	-0.08089024E-11	0.01762273E+04	0.09222724E+02
1000-5000K	0.04072191E+02	0.02131296E-01	-0.05308145E-05	0.06112269E-09	-0.02841164E-13	-0.15797270E+03	0.03476029E+02







Source: SNLL FIT TO JANAF TABLES WITH H298=2.5 PER MILLER

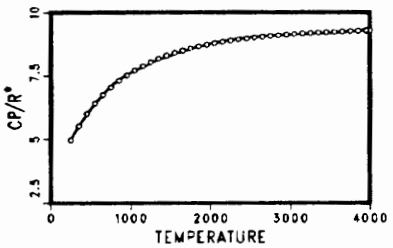
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

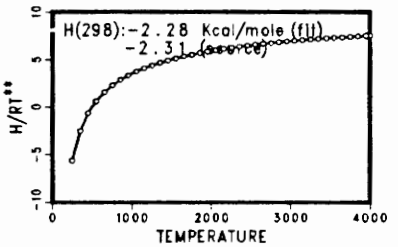
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

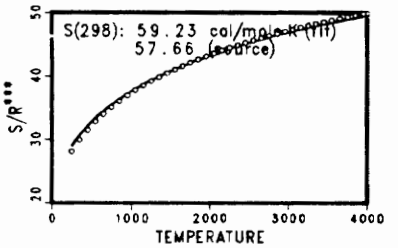
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: HOCN CYANIC ACID TRANS GAS As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0250-1000K	0.03628292E+02	0.05664184E-01	-0.11702056E-06	-0.02348638E-07	0.08016402E-11	-0.02475925E+05	0.07476825E+02
1000-4000K	0.05645607E+02	0.02298206E-01	-0.02162629E-05	-0.12148014E-09	0.02238636E-12	-0.03178109E+05	-0.03590263E+02







Source: SNLL FIT TO BAC-MP4 DATA

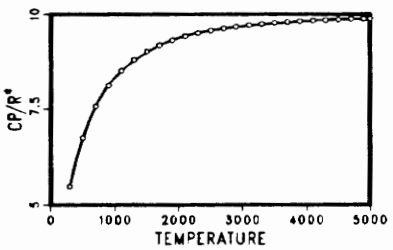
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

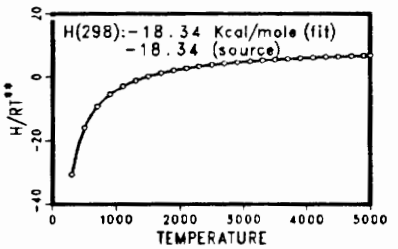
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

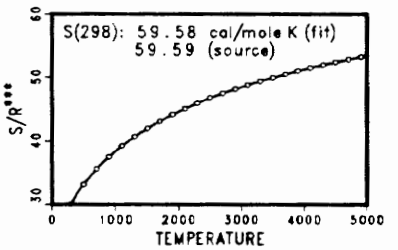
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: HONO NITROUS ACID, CIS- GAS As of: 3/17/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02290413E+02	0.14099223E-01	-0.13678717E-04	0.07498780E-07	-0.01876905E-10	-0.10431945E+05	0.13280769E+02
1000-5000K	0.05486892E+02	0.04218064E-01	-0.16491426E-05	0.02971876E-08	-0.02021148E-12	-0.11268646E+05	-0.02997002E+02







Source: SNLL FIT TO JANAF TABLES (HNO2)

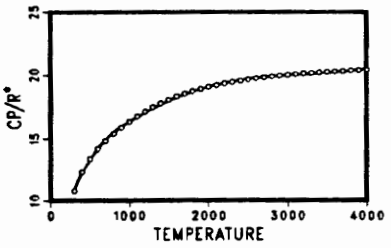
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

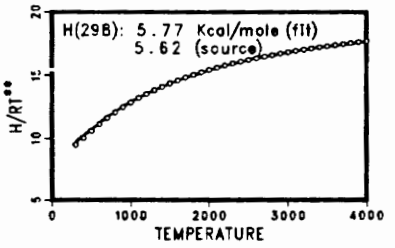
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

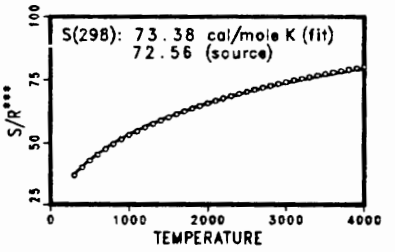
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: HSI(NH2)2 DIAMINOSILANE GAS As of: 2/27/90

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.06289698E+02	0.16750596E-01	-0.15208775E-05	-0.10700650E-07	0.05538640E-10	0.03154770E+04	-0.03746008E+02
1000-4000K	0.11716773E+02	0.05339021E-01	-0.04667823E-05	-0.02824087E-08	0.05080915E-12	-0.12641686E+04	-0.03245117E+03







Source: SNL FIT TO BAC-MP4 DATA

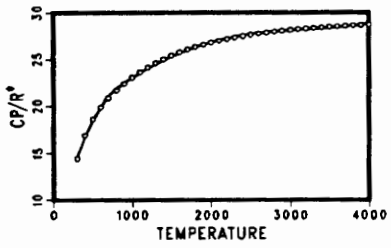
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

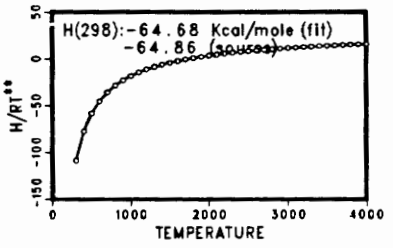
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

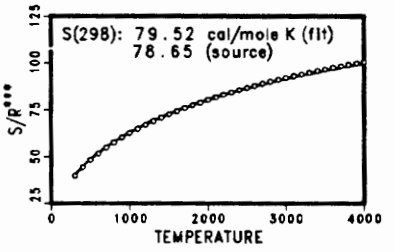
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: HSI(NH2)3 TRIAMINOSILANE GAS As of: 2/27/90

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.07070983E+02	0.02754435E+00	-0.02603669E-04	-0.01874567E-06	0.09778511E-10	-0.03582658E+06	-0.08209675E+02
1000-4000K	0.16614058E+02	0.07395874E-01	-0.06440009E-05	-0.03918887E-08	0.07045959E-12	-0.03859547E+06	-0.05865317E+03







Source: SNL FIT TO BAC-MP4 DATA

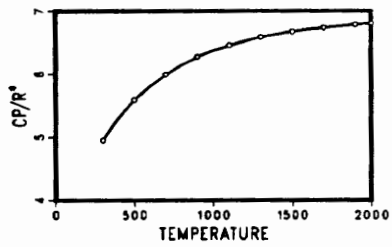
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

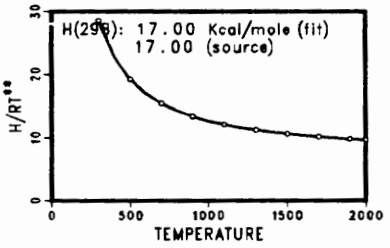
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

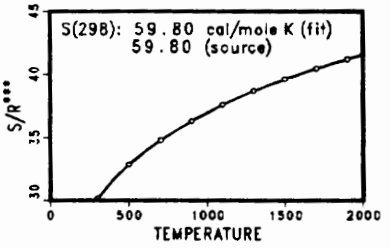
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: HSICL CHLOROSILYLENE GAS As of: 12/19/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03072747E+02	0.09057843E-01	-0.11591338E-04	0.08310476E-07	-0.02482999E-10	0.07324210E+05	0.10334904E+02
1000-2000K	0.04900627E+02	0.01981752E-01	-0.03634646E-05	-0.02285211E-08	0.07633527E-12	0.06914634E+05	0.13770041E+01







Source: SNLL FIT TO DATA GENERATED USING VIBRATIONAL FREQUENCIES

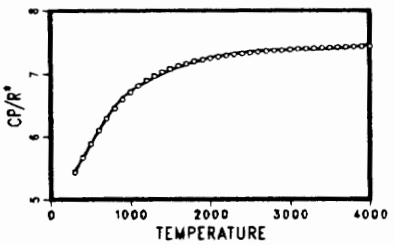
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

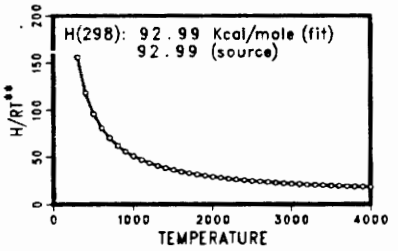
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

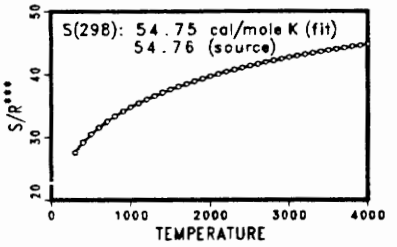
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: HSIN SILANITRILE GAS As of: 2/27/90

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04865176E+02	0.01775119E-01	0.04890869E-05	0.03922382E-08	-0.07913276E-11	0.04526352E+06	-0.07134509E+01
1000-4000K	0.05746590E+02	0.11671186E-02	-0.13607424E-06	-0.05908616E-09	0.11746961E-13	0.04484671E+06	-0.05931788E+02







Source: SNL FIT TO BAC-MP4 DATA

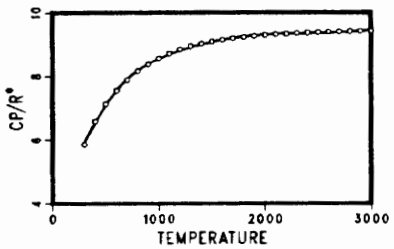
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

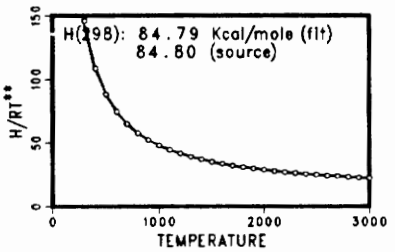
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

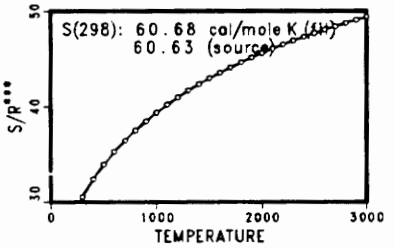
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: HSINH GAS As of: 4/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03566343E+02	0.08446736E-01	-0.07699952E-05	-0.05270970E-07	0.02581065E-10	0.04124903E+06	0.07780791E+02
1000-3000K	0.06493435E+02	0.02567980E-01	-0.03126526E-05	-0.02577467E-08	0.06216479E-12	0.04035934E+06	-0.07830112E+02







Source: SNLL FIT TO BAC-MP4 DATA

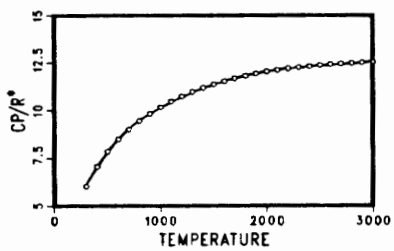
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

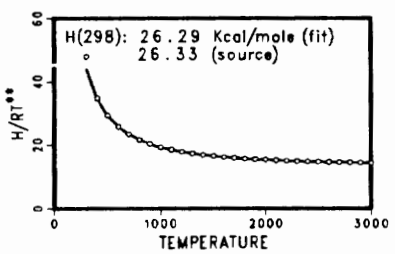
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

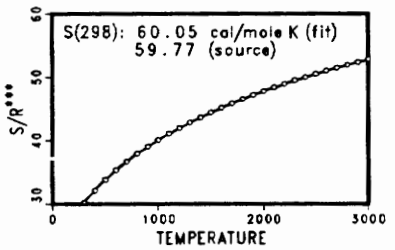
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: HSINH2 AMINOSILYLENE GAS As of: 4/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02716144E+02	0.12042781E-01	-0.09827195E-05	-0.07408477E-07	0.03789792E-10	0.11907715E+05	0.11262523E+02
1000-3000K	0.06177894E+02	0.04689964E-01	-0.03583293E-05	-0.04457980E-08	0.09379187E-12	0.10912773E+05	-0.07006672E+02







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

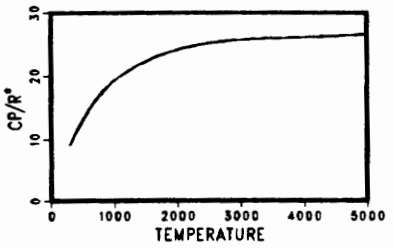
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

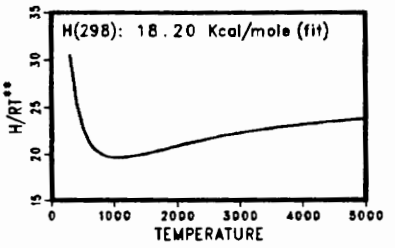
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

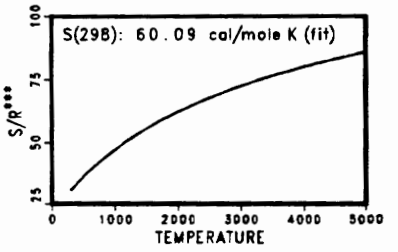
Species: I*C3H7 ISOPROPYL RAD GAS As of: 12/01/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.01713299E+02	0.02542616E+00	0.15808083E-05	-0.01821286E-06	0.08827710E-10	0.07535808E+05	0.12979008E+02
1000-5000K	0.08063369E+02	0.15744876E-01	-0.05182391E-04	0.07477245E-08	-0.03854422E-12	0.05313871E+05	-0.02192646E+03







Source: BURCAT (TECHNION REPORTS)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

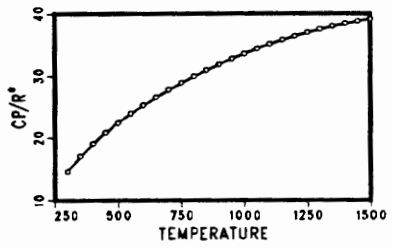
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

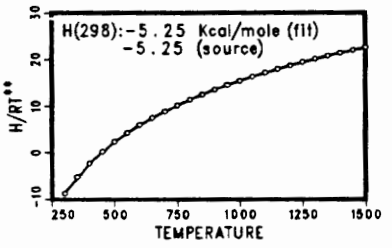
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

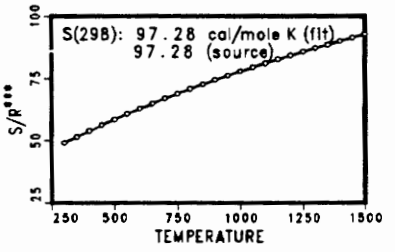
Species: ME2GAET ("ME"=CH3,METHYL; "ET"=C2H5,ETHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	-0.03218207E+02	0.06398884E+00	0.15545521E-04	-0.12847095E-06	0.09441259E-09	-0.04451897E+05	0.04848091E+03
0600-1500K	0.07174541E+02	0.03235532E+00	0.14951986E-05	-0.10482260E-07	0.03053961E-10	-0.06383914E+05	-0.02026765E+02







Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

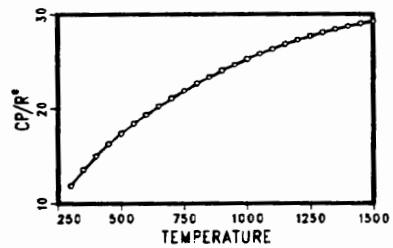
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

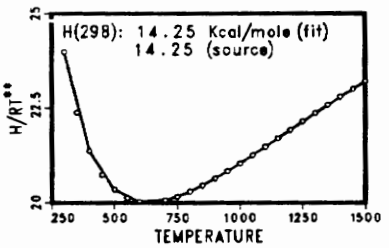
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

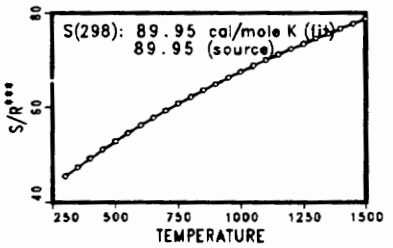
Species: MEGAET ("ME"=CH3,METHYL; "ET"=C2H5,ETHYL) GAS As of: 6/29/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	-0.08169937E+01	0.04554296E+00	0.10531326E-04	-0.09079987E-06	0.06700563E-09	0.05448005E+05	0.03655501E+03
0600-1500K	0.06600990E+02	0.02284791E+00	0.10133754E-05	-0.07318045E-07	0.02140196E-10	0.04071592E+05	0.05239051E+01







Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

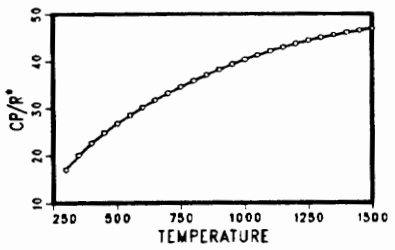
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

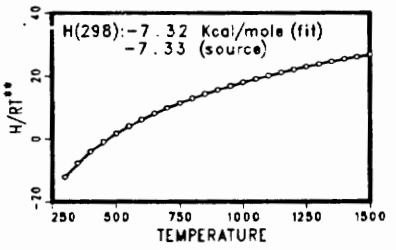
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

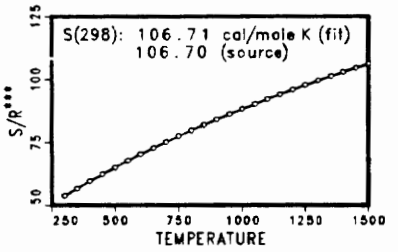
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: MEGAET2 ("ME"=CH3,METHYL; "ET"=C2H5,ETHYL) GAS As of: 6/29/87

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0600K	-0.05607498E+02	0.08187357E+00	0.01920530E-03	-0.01678978E-05	0.12433538E-09	-0.05546687E+05	0.06163371E+03
0600-1500K	0.08123155E+02	0.03978908E+00	0.01690979E-04	-0.13084149E-07	0.03852598E-10	-0.08091056E+05	-0.05039992E+02





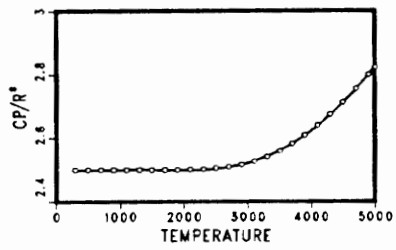


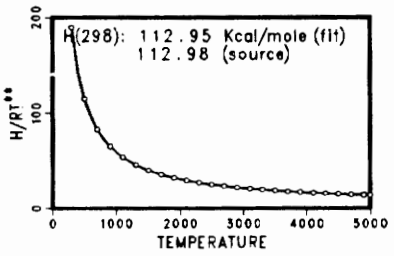
Source: SNLL FIT TO DATA GENERATED FROM POLLARD FIT
Comments: R. POLLARD, J. CRYSTAL GROW., V.77, P.200 (1986)

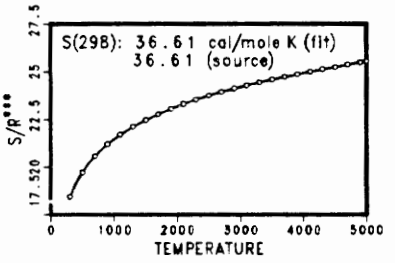
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: N NITROGEN, MONATOMIC GAS As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02503071E+02	-0.02180018E-03	0.05420529E-06	-0.05647560E-09	0.02099904E-12	0.05609890E+06	0.04167566E+02
1000-5000K	0.02450268E+02	0.10661458E-03	-0.07465337E-06	0.01879652E-09	-0.10259839E-14	0.05611604E+06	0.04448758E+02





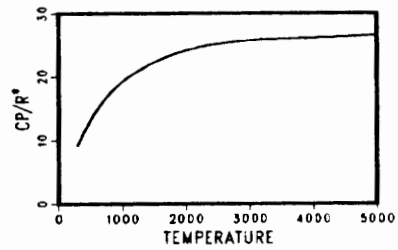


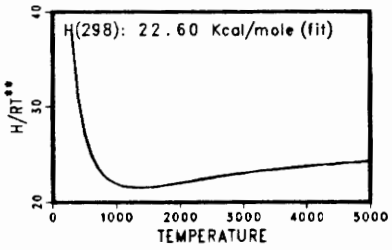
Source: NASA FIT TO JANAF TABLES

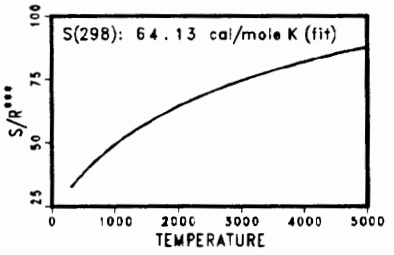
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: N*C3H7 N-PROPYL RAD GAS As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.01922536E+02	0.02478927E+00	0.01810249E-04	-0.01783265E-06	0.08582996E-10	0.09713281E+05	0.13992715E+02
1000-5000K	0.07978290E+02	0.15761134E-01	-0.05173243E-04	0.07443892E-08	-0.03824978E-12	0.07579402E+05	-0.01935611E+03







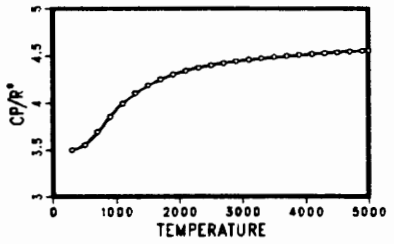
Source: BURCAT (TECHNION REPORTS)

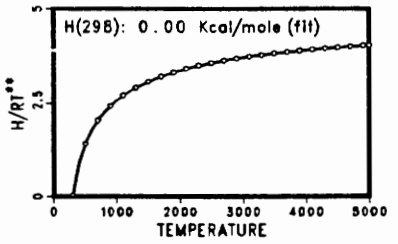
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

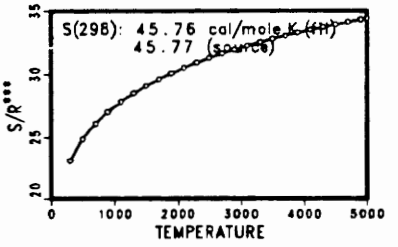
Species: N2 NITROGEN, DIATOMIC (REF ST) GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03298677E+02	0.14082404E-02	-0.03963222E-04	0.05641515E-07	-0.02444854E-10	-0.10208999E+04	0.03950372E+02
1000-5000K	0.02926640E+02	0.14879768E-02	-0.05684760E-05	0.10097038E-09	-0.06753351E-13	-0.09227977E+04	0.05980528E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

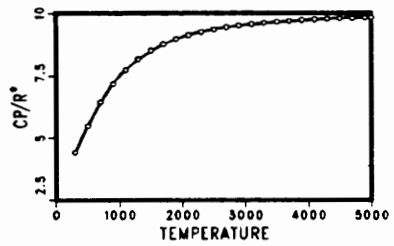
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

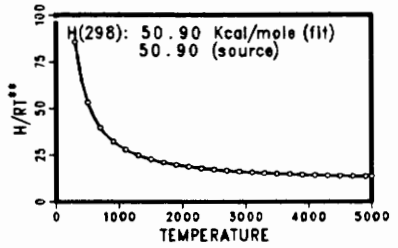
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

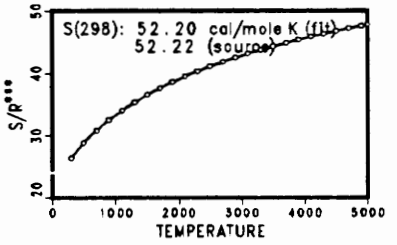
Species: N2H2 DI-IMIDE GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.16179994E+01	0.13063122E-01	-0.01715711E-03	0.16056079E-07	-0.06093638E-10	0.02467526E+06	0.13794670E+02
1000-5000K	0.03371185E+02	0.06039968E-01	-0.02303853E-04	0.04062789E-08	-0.02713144E-12	0.02418172E+06	0.04980585E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

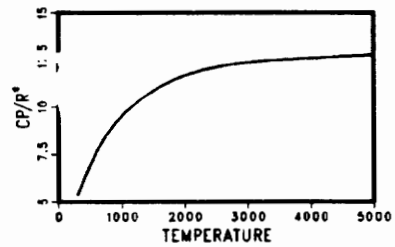
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

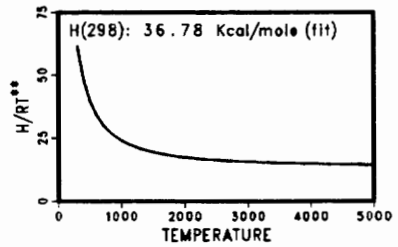
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

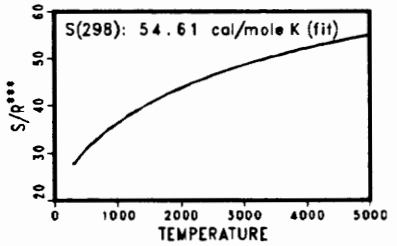
Species: N2H3 GAS As of: 12/01/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03174203E+02	0.04715907E-01	0.13348671E-04	-0.01919684E-06	0.07487563E-10	0.01727269E+06	0.07557224E+02
1000-5000K	0.04441846E+02	0.07214270E-01	-0.02495684E-04	0.03920564E-08	-0.02298949E-12	0.16642211E+05	-0.04275204E+01







Source: SNLL FIT TO BAHN DATA OF 1973

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

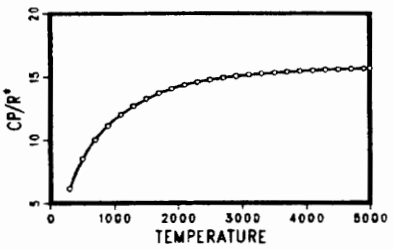
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

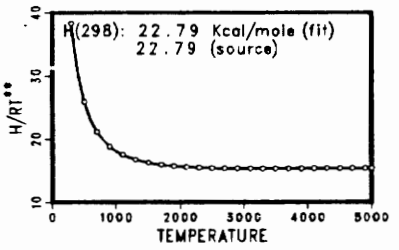
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

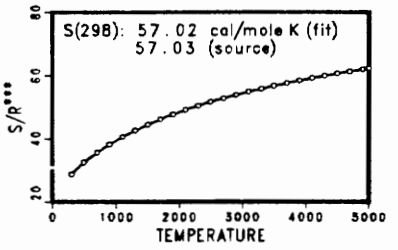
Species: N2H4 HYDRAZINE GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.06442605E+00	0.02749729E+00	-0.02899451E-03	0.01745239E-06	-0.04422282E-10	0.10451917E+05	0.02127789E+03
1000-5000K	0.04977317E+02	0.09595519E-01	-0.03547639E-04	0.06124299E-08	-0.04029795E-12	0.09341219E+05	-0.02962989E+02







Source: SNLL FIT TO JANAF TABLES

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

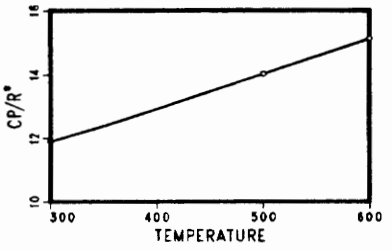
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

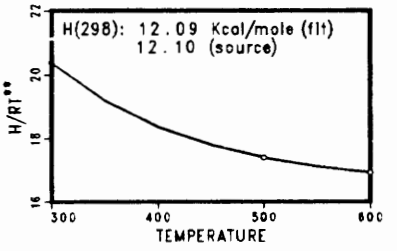
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

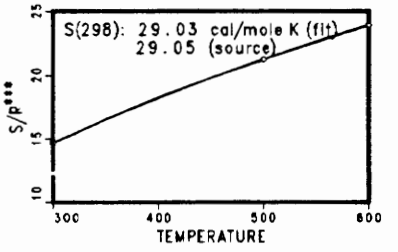
Species: N2H4(L) HYDRAZINE LIQUID As of: 9/05/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-0450K	0.09047444E+02	0.09241592E-01	0.02263547E-04	-0.08952247E-07	0.14868629E-10	0.02970392E+05	-0.03974033E+03
0450-0600K	0.08890683E+02	0.08330343E-01	0.04945549E-04	-0.04909251E-08	-0.03355824E-10	0.03032250E+05	-0.03871433E+03







Source: SNLL FIT TO JANAF TABLES

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

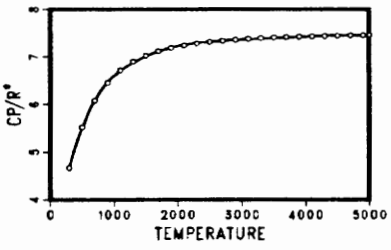
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

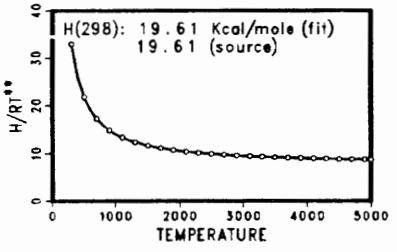
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

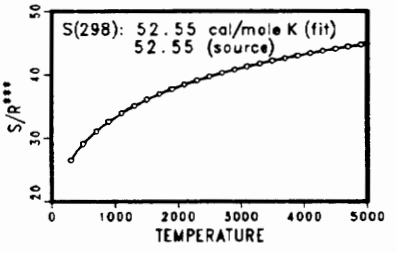
Species: N2O DINITROGEN MONOXIDE GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02543057E+02	0.09492193E-01	-0.09792775E-04	0.06263844E-07	-0.01901825E-10	0.08765100E+04	0.09511222E+02
1000-5000K	0.04718977E+02	0.02873713E-01	-0.11974958E-05	0.02250551E-08	-0.15753370E-13	0.08165811E+04	-0.16572504E+01







Source: SNLL FIT TO JANAF TABLES

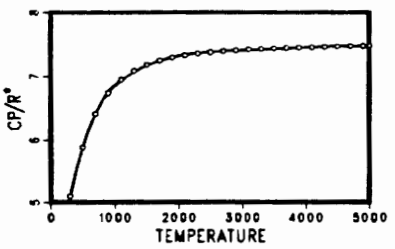
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

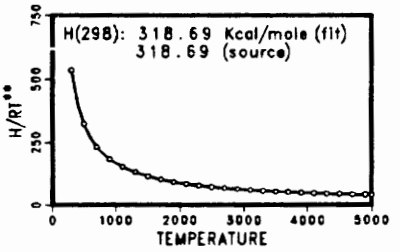
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

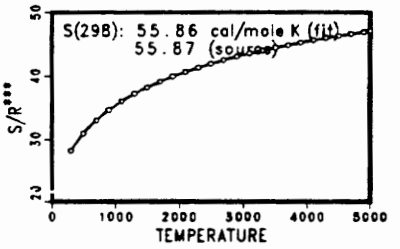
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: N2O+ DINITROGEN MONOXIDE, UNIPOSITIVE ION GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03187228E+02	0.08350714E-01	-0.07894548E-04	0.04597444E-07	-0.13810748E-11	0.15912794E+06	0.07779425E+02
1000-5000K	0.05398516E+02	0.02249478E-01	-0.09577056E-05	0.01823192E-08	-0.12844222E-13	0.15848513E+06	-0.03733146E+02







Source: SNLL FIT TO JANAF TABLES

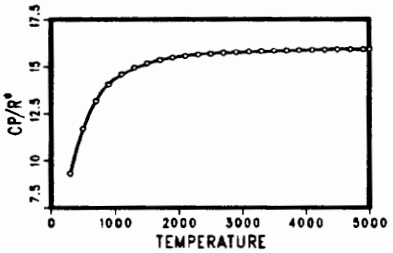
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

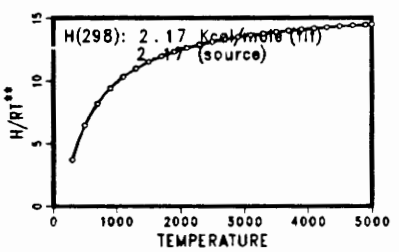
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

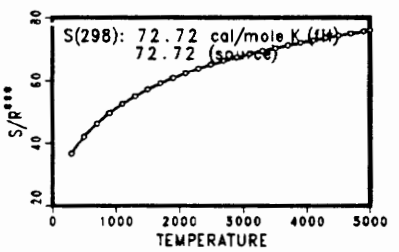
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: N2O4 NITROGEN TETROXIDE GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03624592E+02	0.02474708E+00	-0.02172874E-03	0.09927103E-07	-0.02222817E-10	-0.09128241E+04	0.09457174E+02
1000-5000K	0.10482201E+02	0.05972272E-01	-0.02564043E-04	0.04916885E-08	-0.03490969E-12	-0.02849988E+05	-0.02612289E+03







Source: SNLL FIT TO JANAF TABLES

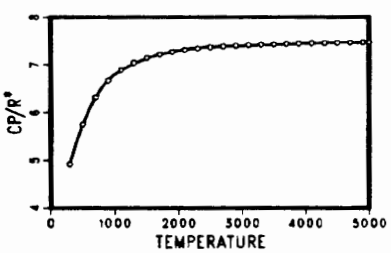
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

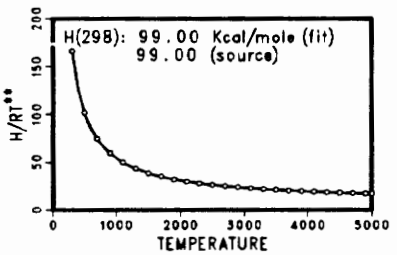
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

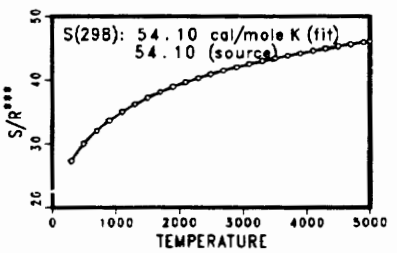
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: N3 AZIDE GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02882218E+02	0.08930338E-01	-0.08539038E-04	0.05045585E-07	-0.15212480E-11	0.04863468E+06	0.08481757E+02
1000-5000K	0.05208505E+02	0.02444507E-01	-0.10389415E-05	0.01977416E-08	-0.13956436E-13	0.04796178E+06	-0.03612755E+02







Source: SNLL FIT TO JANAF TABLES

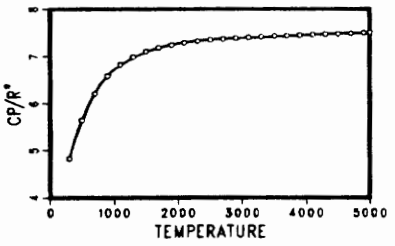
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

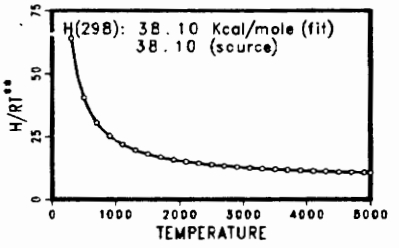
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

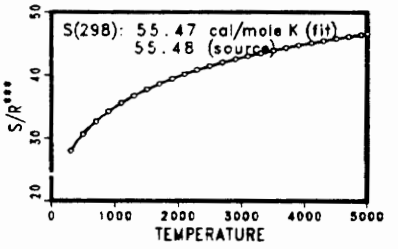
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: NCO NCO RADICAL GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02830320E+02	0.08871490E-01	-0.08945636E-04	0.05876918E-07	-0.01907734E-10	0.01800543E+06	0.09498831E+02
1000-5000K	0.05012045E+02	0.02626773E-01	-0.11082433E-05	0.02093860E-08	-0.14603470E-13	0.01737185E+06	-0.01830075E+02







Source: SNLL FIT TO JANAF TABLES

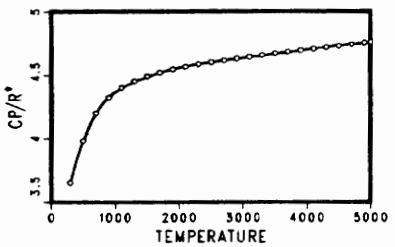
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

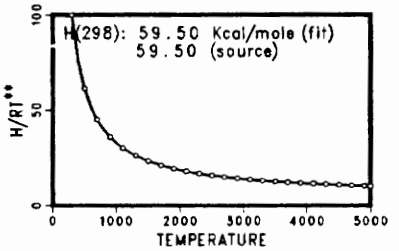
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

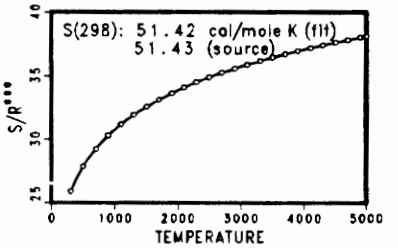
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: NF NITROGEN MONOFLUORIDE GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02871947E+02	0.03312192E-01	-0.02691158E-04	0.11219514E-08	-0.02475130E-11	0.02896257E+06	0.08640247E+02
1000-5000K	0.03862176E+02	0.07551806E-02	-0.03044942E-05	0.05874447E-09	-0.04187479E-13	0.02867242E+06	0.03457232E+02







Source: SNLL FIT TO JANAF TABLES (FN)

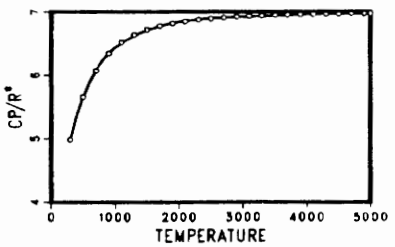
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

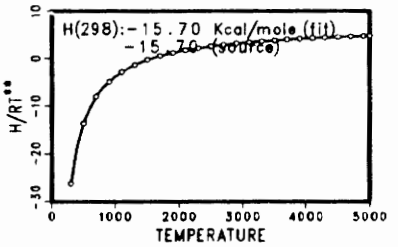
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

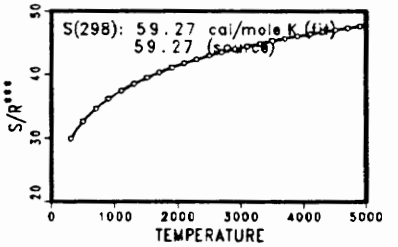
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: NFO NITROSYL FLUORIDE GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03352307E+02	0.07229966E-01	-0.06951136E-04	0.03828526E-07	-0.10235582E-11	-0.09167035E+05	0.08854189E+02
1000-5000K	0.05174520E+02	0.01938472E-01	-0.08222701E-05	0.15642909E-09	-0.11044974E-13	-0.09670935E+05	-0.05352460E+01







Source: SNLL FIT TO JANAF TABLES (FNO)

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

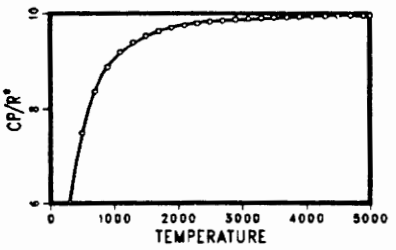
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

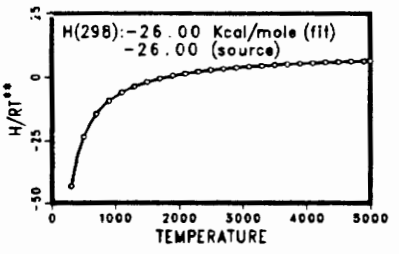
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

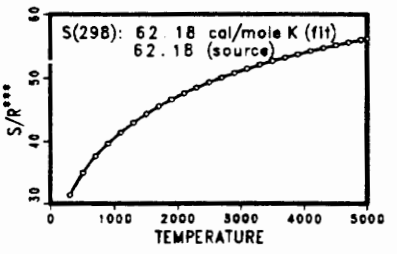
Species: NFO2 NITRYL FLUORIDE GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02447528E+02	0.15441095E-01	-0.13005952E-04	0.04856383E-07	-0.06852266E-11	-0.14393999E+05	0.13283604E+02
1000-5000K	0.06816857E+02	0.03462639E-01	-0.14922156E-05	0.02869665E-08	-0.02041856E-12	-0.15602619E+05	-0.09320129E+02







Source: SNLL FIT TO JANAF TABLES (FNO2)

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

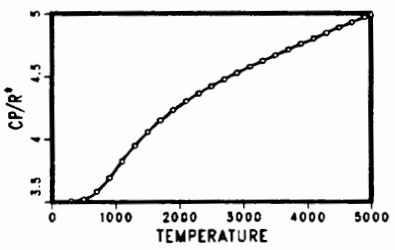
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

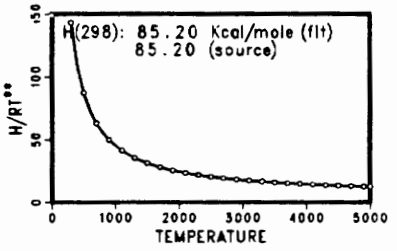
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

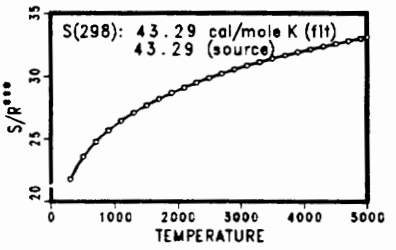
Species: NH IMIDOGEN GAS As of: 3/13/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03339758E+02	0.12530086E-02	-0.03491645E-04	0.04218812E-07	-0.15576179E-11	0.04185047E+06	0.02507180E+02
1000-5000K	0.02760249E+02	0.13753463E-02	-0.04451914E-05	0.07692791E-09	-0.05017592E-13	0.04207828E+06	0.05857199E+02







Source: FIT JANAF TABLES WITH H298=85.2 PER MILLER

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

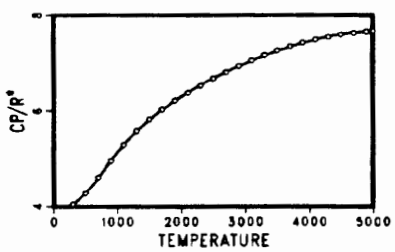
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

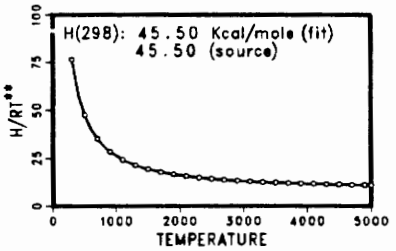
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

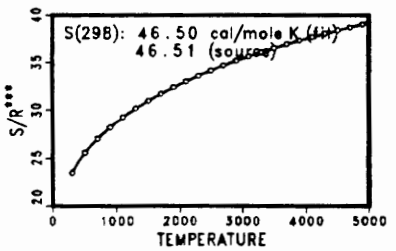
Species: NH2 AMIDOGEN GAS As of: 12/16/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03432493E+02	0.03299540E-01	-0.06613600E-04	0.08590947E-07	-0.03572046E-10	0.02177227E+06	0.03090110E+02
1000-5000K	0.02961311E+02	0.02932699E-01	-0.09063600E-05	0.16172575E-09	-0.12042003E-13	0.02191976E+06	0.05777878E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

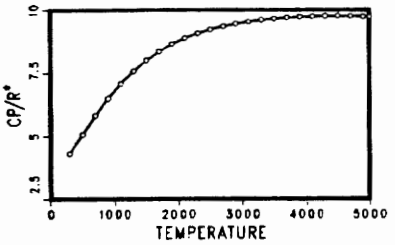
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

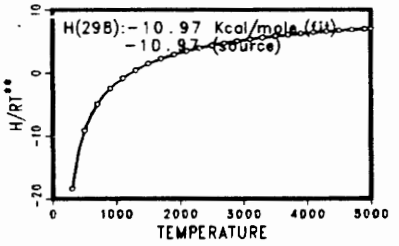
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

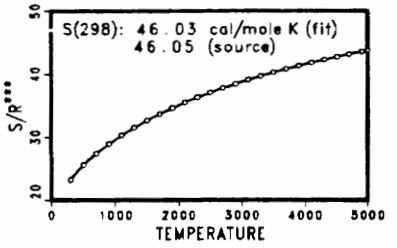
Species: NH3 AMMONIA GAS As of: 12/13/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02204351E+02	0.10114765E-01	-0.14652648E-04	0.14472350E-07	-0.05328509E-10	-0.06525488E+05	0.08127138E+02
1000-5000K	0.02461904E+02	0.06059166E-01	-0.02004976E-04	0.03136003E-08	-0.01938317E-12	-0.06493269E+05	0.07472097E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

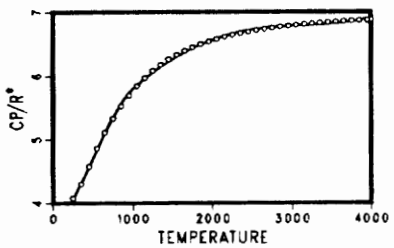
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

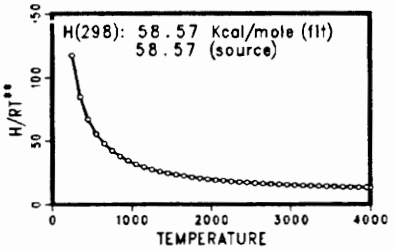
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

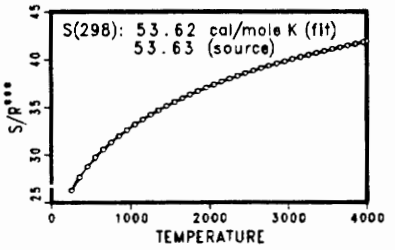
Species: NNH GAS As of: 12/01/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0250-1000K	0.03501344E+02	0.02053586E-01	0.07170409E-05	0.04921348E-08	-0.09671170E-11	0.02833347E+06	0.06391837E+02
1000-4000K	0.04415342E+02	0.16143879E-02	-0.16328943E-06	-0.08559846E-09	0.16147909E-13	0.02788029E+06	0.09042888E+01







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

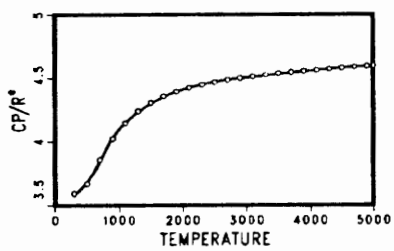
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

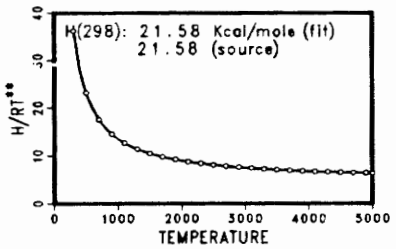
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

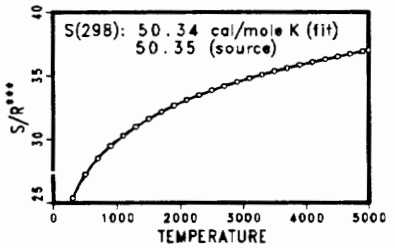
Species: NO NITRIC OXIDE GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03376541E+02	0.12530634E-02	-0.03302750E-04	0.05217810E-07	-0.02446262E-10	0.09817961E+05	0.05829590E+02
1000-5000K	0.03245435E+02	0.12691383E-02	-0.05015890E-05	0.09169283E-09	-0.06275419E-13	0.09800840E+05	0.06417293E+02







Source: SNLL FIT TO JANAF TABLES

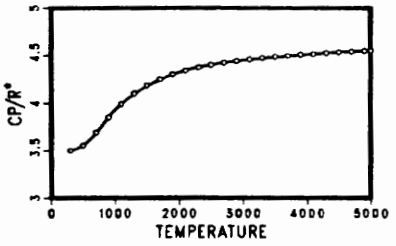
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

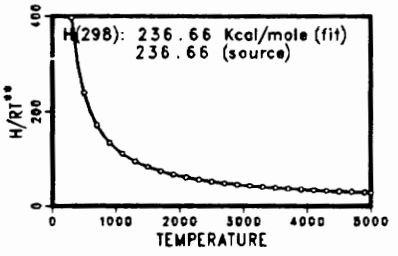
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

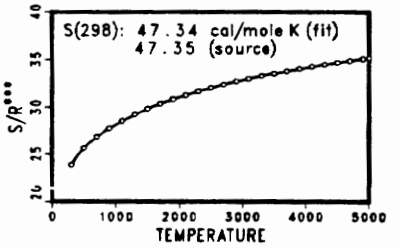
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: NO+ NITRIC OXIDE, UNIPOSITIVE ION GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03297349E+02	0.14228899E-02	-0.04007441E-04	0.05670551E-07	-0.02446971E-10	0.11808338E+06	0.04749948E+02
1000-5000K	0.02914888E+02	0.14993349E-02	-0.05727972E-05	0.10177767E-09	-0.06825390E-13	0.11818688E+06	0.06844346E+02







Source: SNLL FIT TO JANAF TABLES

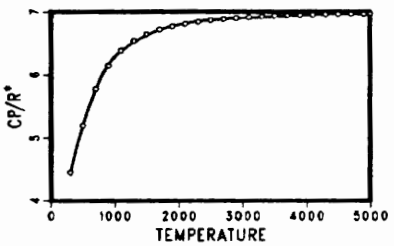
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

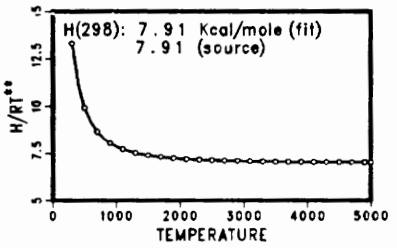
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

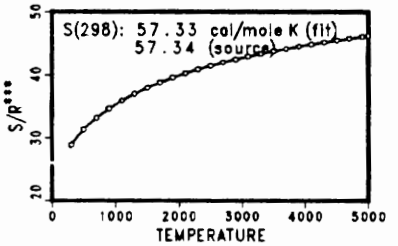
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: NO2 NITROGEN DIOXIDE GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02670600E+02	0.07838500E-01	-0.08063864E-04	0.06161714E-07	-0.02320150E-10	0.02896290E+05	0.11612071E+02
1000-5000K	0.04682859E+02	0.02462429E-01	-0.10422585E-05	0.01976902E-08	-0.13917168E-13	0.02261292E+05	0.09885985E+01







Source: SNLL FIT TO JANAF TABLES

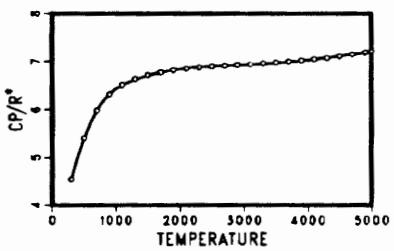
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

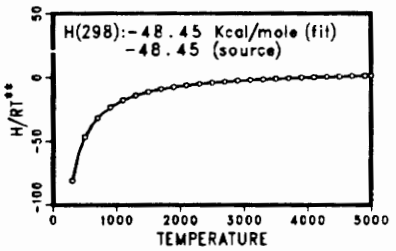
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

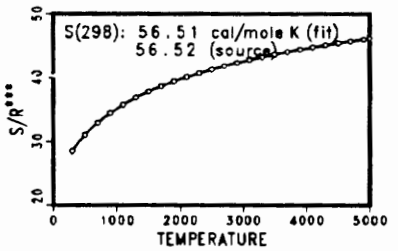
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: NO2- NITROGEN DIOXIDE, UNINEGATIVE ION GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02448586E+02	0.08982507E-01	-0.07853431E-04	0.03927276E-07	-0.10716939E-11	-0.02545097E+06	0.12130600E+02
1000-5000K	0.05043114E+02	0.02166427E-01	-0.09455454E-05	0.01816313E-08	-0.12383945E-13	-0.02621553E+06	-0.14459051E+01







Source: SNLL FIT TO JANAF TABLES

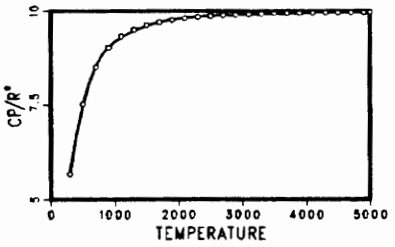
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

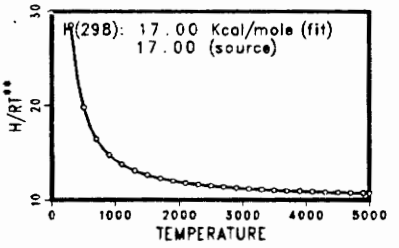
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

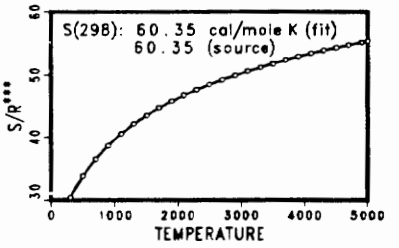
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: NO3 NITROGEN TRIOXIDE GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.12210763E+01	0.01878797E+00	-0.13443212E-04	0.12746013E-08	0.13540601E-11	0.07473144E+05	0.01840202E+03
1000-5000K	0.07120307E+02	0.03246228E-01	-0.14316134E-05	0.02797053E-08	-0.02013007E-12	0.05864479E+05	-0.12137301E+02







Source: SNLL FIT TO JANAF TABLES

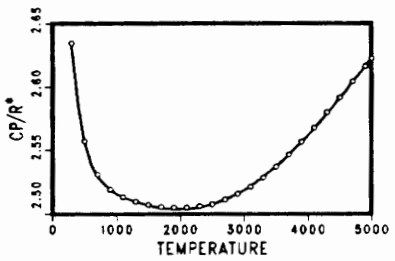
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

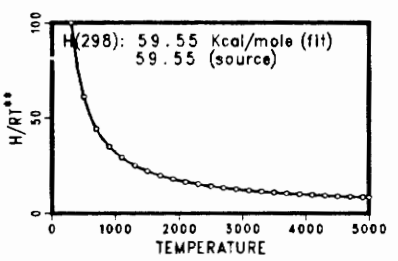
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

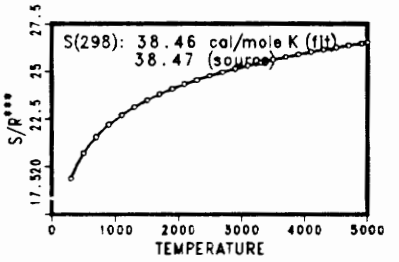
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: O OXYGEN, MONATOMIC GAS As of: 12/01/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02946428E+02	-0.16381665E-02	0.02421031E-04	-0.16028431E-08	0.03890696E-11	0.02914764E+06	0.02963995E+02
1000-5000K	0.02542059E+02	-0.02755061E-03	-0.03102803E-07	0.04551067E-10	-0.04368051E-14	0.02923080E+06	0.04920308E+02







Source: NASA FIT TO JANAF TABLES

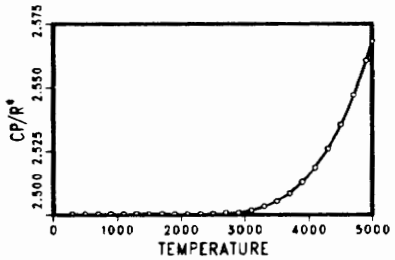
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

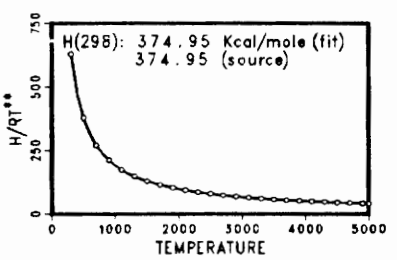
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

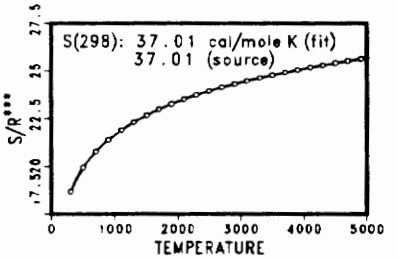
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: O+ OXYGEN, UNIPOSITIVE ION GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02499272E+02	0.05820598E-04	-0.11209219E-07	0.08232108E-10	-0.01916378E-13	0.01879556E+07	0.04384825E+02
1000-5000K	0.02501869E+02	-0.06107262E-04	0.07324307E-07	-0.03438353E-10	0.05506407E-14	0.01879552E+07	0.04372826E+02







Source: SNLL FIT TO JANAF TABLES

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

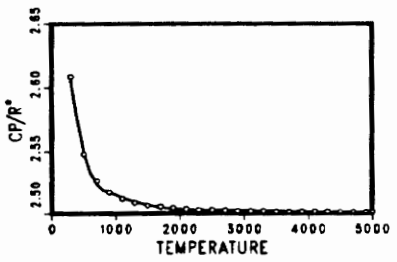
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

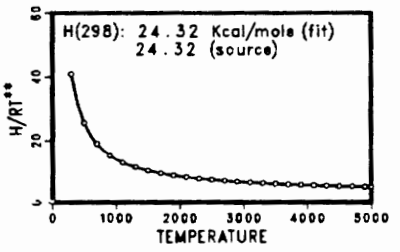
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

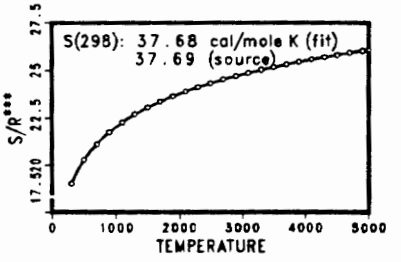
Species: O- OXYGEN,UNINEGATIVE ION GAS As of: 9/05/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02747263E+02	-0.05724860E-02	0.02712548E-05	0.02691511E-08	-0.02002357E-11	0.11443947E+05	0.03469852E+02
1000-5000K	0.02559580E+02	-0.07147887E-03	0.03301804E-06	-0.06660944E-10	0.04900726E-14	0.11489346E+05	0.04426186E+02







Source: SNLL FIT TO JANAF TABLES

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

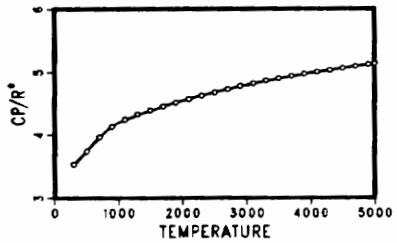
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

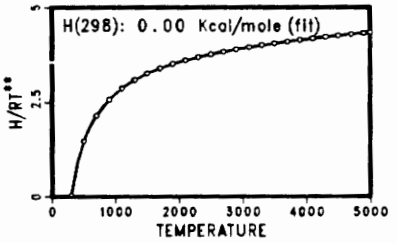
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

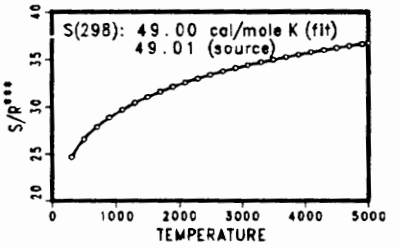
Species: O2 OXYGEN, DIATOMIC (REF ST) GAS As of: 12/13/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03212936E+02	0.11274864E-02	-0.05756150E-05	0.13138773E-08	-0.08768554E-11	-0.10052490E+04	0.06034737E+02
1000-5000K	0.03697578E+02	0.06135197E-02	-0.12588420E-06	0.01775281E-09	-0.11364354E-14	-0.12339301E+04	0.03189165E+02







Source: SNLL FIT TO JANAF TABLES

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

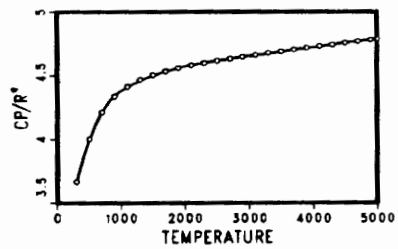
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

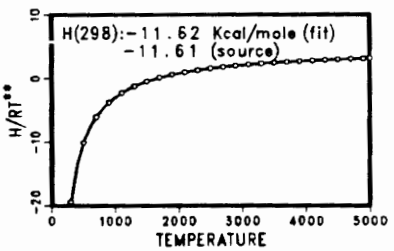
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

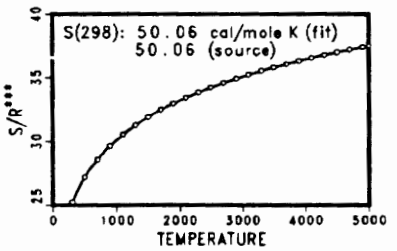
Species: O2- OXYGEN, DIATOMIC, UNINEGATIVE ION GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02872291E+02	0.03359716E-01	-0.02664886E-04	0.09807524E-08	-0.16709571E-12	-0.06829094E+05	0.07938372E+02
1000-5000K	0.03883013E+02	0.07407872E-02	-0.02961776E-05	0.05724304E-09	-0.04086547E-13	-0.07121644E+05	0.02658211E+02







Source: SNLL FIT TO JANAF TABLES

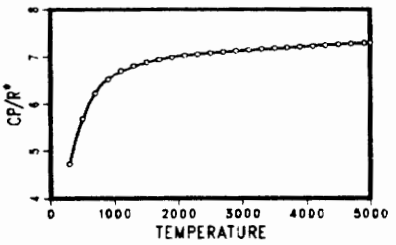
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

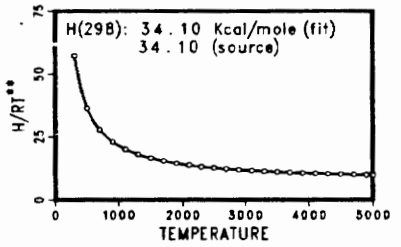
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

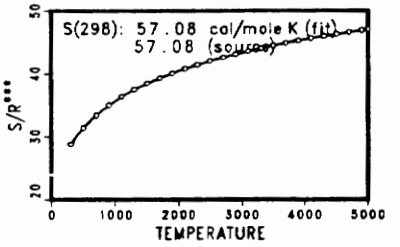
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: O3 OZONE GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.0246260BE+02	0.09582781E-01	-0.07087359E-04	0.13633683E-08	0.02969647E-11	0.16061522E+05	0.12141870E+02
1000-5000K	0.05429371E+02	0.01820380E-01	-0.07705607E-05	0.14992929E-09	-0.10755629E-13	0.15235267E+05	-0.03266386E+02







Source: SNLL FIT TO JANAF TABLES

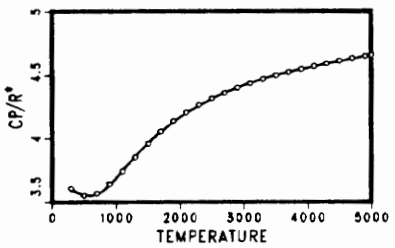
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

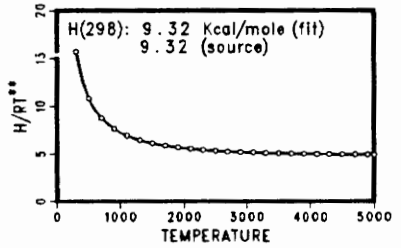
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

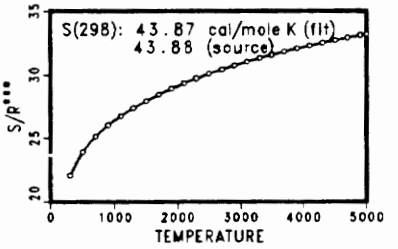
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: OH HYDROXYL GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03637266E+02	0.01850910E-02	-0.16761646E-05	0.02387202E-07	-0.08431442E-11	0.03606781E+05	0.13588605E+01
1000-5000K	0.02882730E+02	0.10139743E-02	-0.02276877E-05	0.02174683E-09	-0.05126305E-14	0.03886888E+05	0.05595712E+02







Source: SNLL FIT TO JANAF TABLES

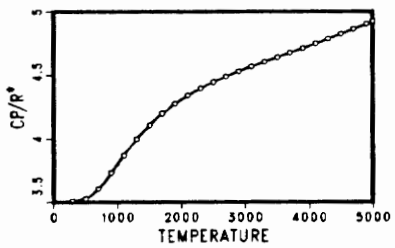
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

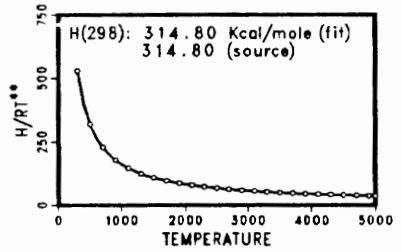
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

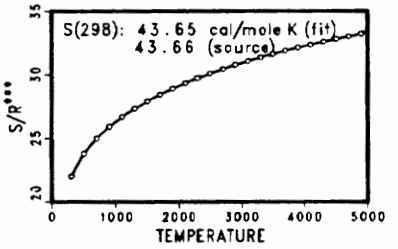
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: OH+ HYDROXYL, UNIPOSITIVE ION GAS As of: 12/12/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03326978E+02	0.13457859E-02	-0.03777167E-04	0.04687749E-07	-0.01780982E-10	0.15740294E+06	0.02744042E+02
1000-5000K	0.0271905BE+02	0.15085714E-02	-0.05029369E-05	0.08261951E-09	-0.04947452E-13	0.15763414E+06	0.06234536E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

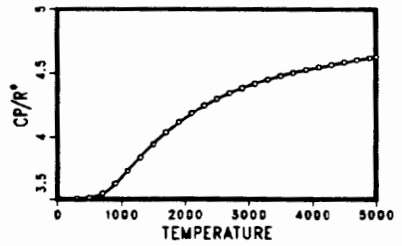
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

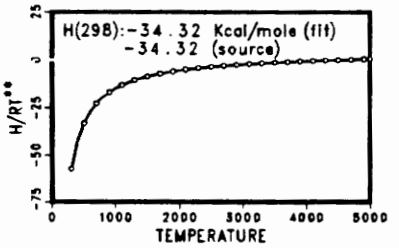
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

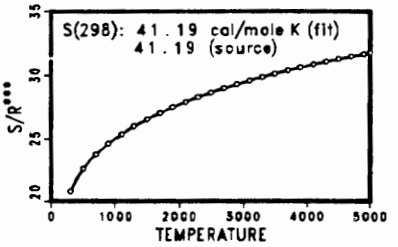
Species: OH- HYDROXYL, UNINEGATIVE ION GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03390037E+02	0.07922381E-02	-0.01943429E-04	0.02001769E-07	-0.05702087E-11	-0.01830493E+06	0.12498923E+01
1000-5000K	0.02846204E+02	0.10418347E-02	-0.02416850E-05	0.02483215E-09	-0.07775605E-14	-0.01807280E+06	0.04422712E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

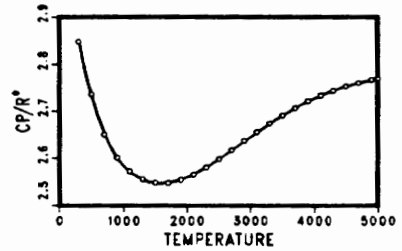
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

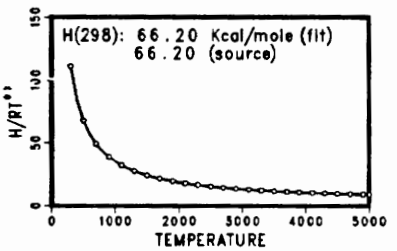
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

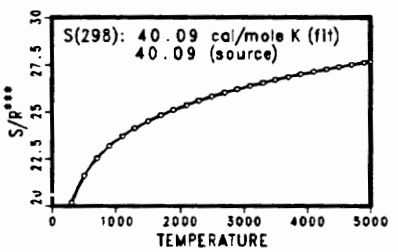
Species: S SULFUR, MONATOMIC GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03187329E+02	-0.15957763E-02	0.02005531E-04	-0.15070814E-08	0.04931282E-11	0.03242259E+06	0.02414441E+02
1000-5000K	0.02902148E+02	-0.05484546E-02	0.02764576E-05	-0.05017114E-09	0.03150684E-13	0.03249423E+06	0.03838471E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

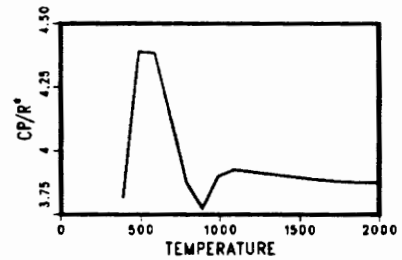
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

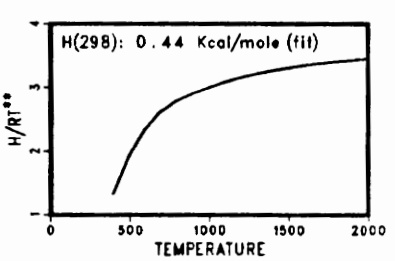
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

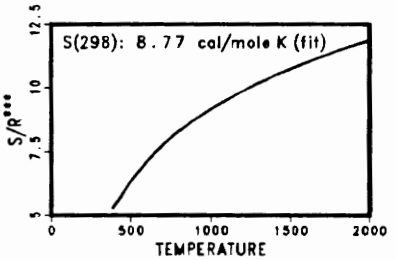
Species: S(L) SULFUR LIQUID As of: 12/01/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0388-1000K	-0.12706310E+02	0.09072521E+00	-0.01695178E-02	0.13070636E-06	-0.03527615E-09	0.12346069E+04	0.05621016E+03
1000-2000K	0.03603667E+02	0.09903341E-02	-0.10114410E-05	0.04053632E-08	-0.05667913E-12	-0.08453839E+04	-0.16344708E+02







Source: NASA FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

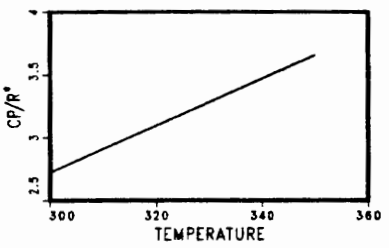
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

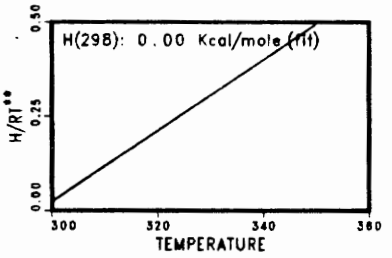
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

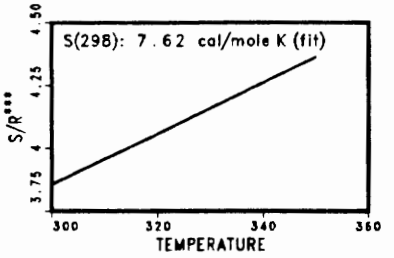
Species: S(S) SULFUR SOLID As of: 12/01/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	-0.05063702E+02	0.02881935E-01	-0.02133020E-03	0.08478786E-05	-0.01734496E-07	0.07148263E+04	0.02871407E+03
1000-0388K	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00







Source: NASA FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

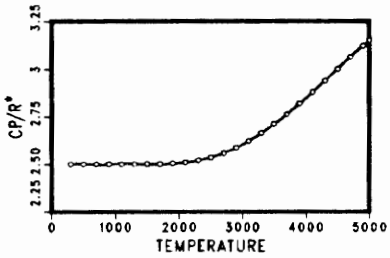
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

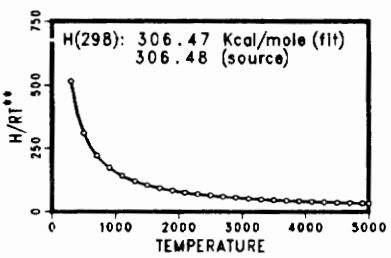
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

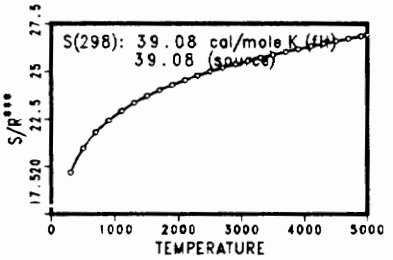
Species: S+ SULFUR, MONATOMIC, UNIPOSITIVE ION GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02366100E+02	0.09130767E-02	-0.02140283E-04	0.02076177E-07	-0.07133859E-11	0.15350910E+06	0.05993094E+02
1000-5000K	0.02404600E+02	0.02410908E-02	-0.02041779E-05	0.06592945E-09	-0.05756939E-13	0.15352225E+06	0.05924256E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

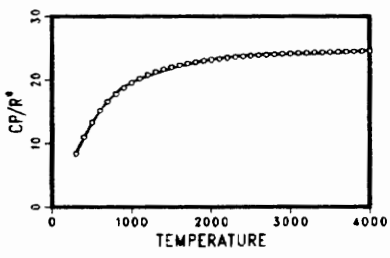
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

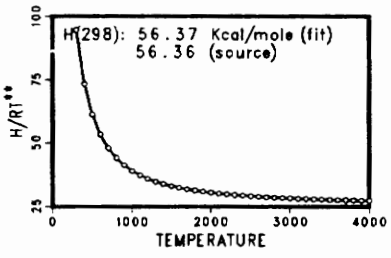
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

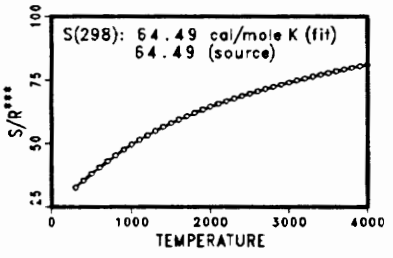
Species: S-TRIAZINE GAS As of: 4/16/87

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04493492E+01	0.02728306E+00	0.02309304E-04	-0.14968443E-07	0.04546753E-10	0.02703032E+06	0.02178518E+03
1000-4000K	0.13036170E+02	0.07711820E-01	-0.07724374E-05	-0.04385191E-08	0.08298992E-12	0.02251663E+06	-0.04777676E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

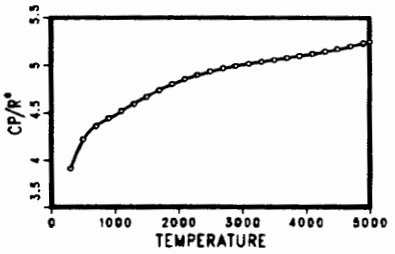
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

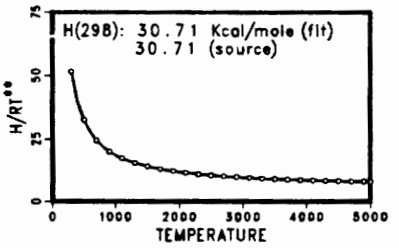
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

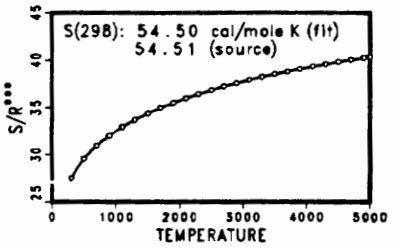
Species: S2 SULFUR, DIATOMIC GAS As of: 12/13/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03157672E+02	0.03099480E-01	-0.15607465E-05	-0.13578905E-08	0.11374435E-11	0.14391873E+05	0.08596062E+02
1000-5000K	0.03904443E+02	0.06925733E-02	-0.12330970E-06	0.08783809E-11	0.13746621E-14	0.14256933E+05	0.04956834E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

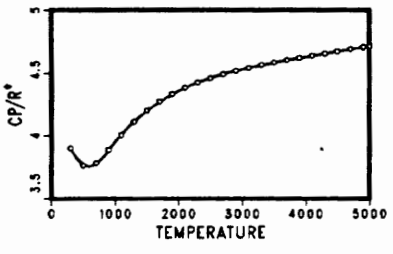
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

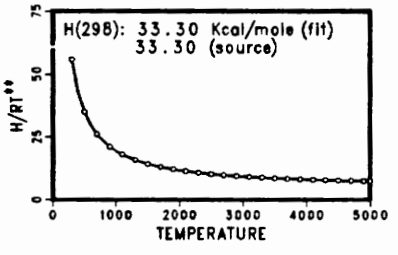
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

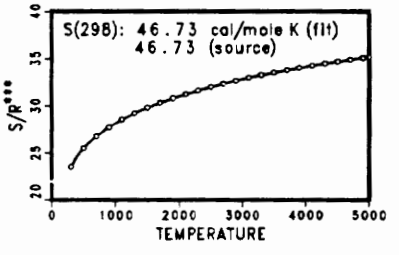
Species: SH SULFUR MONOHYDRID GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04133326E+02	-0.03787893E-02	-0.02777854E-04	0.05370112E-07	-0.02394006E-10	0.15558623E+05	0.16115348E+00
1000-5000K	0.03053810E+02	0.12588843E-02	-0.04249169E-05	0.06929591E-09	-0.04281691E-13	0.15882250E+05	0.05973551E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

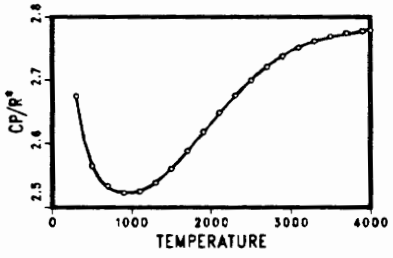
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

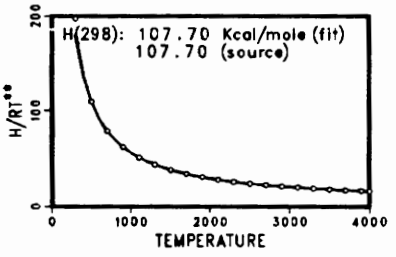
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

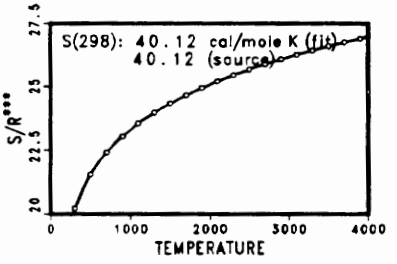
Species: SI SILICON, MONATOMIC GAS As of: 3/29/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03113515E+02	-0.02330991E-01	0.03518530E-04	-0.02417573E-07	0.06391902E-11	0.05335061E+06	0.03009718E+02
1000-4000K	0.02775845E+02	-0.06213257E-02	0.04843696E-05	-0.12756146E-09	0.11344818E-13	0.05339790E+06	0.04543298E+02







Source: SNLL FIT TO JANAF TABLES

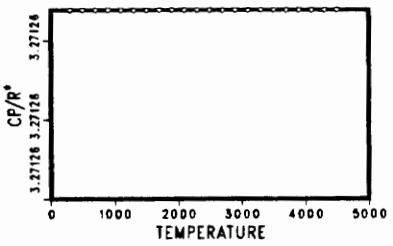
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

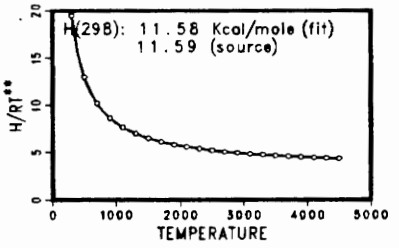
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

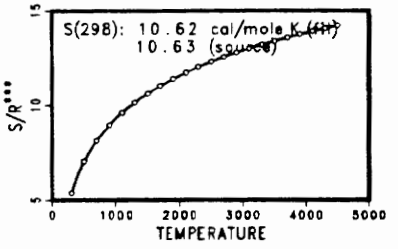
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SI(L) SILICON LIQUID As of: 9/05/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03271263E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.04855058E+05	-0.13290542E+02
1000-4500K	0.03271263E+02	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.00000000E+00	0.04855057E+05	-0.13290542E+02







Source: SNLL FIT TO JANAF TABLES

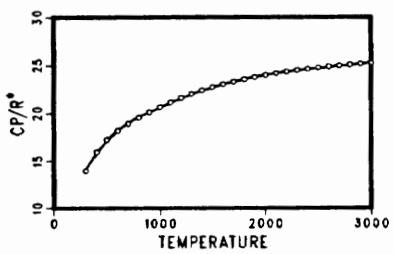
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

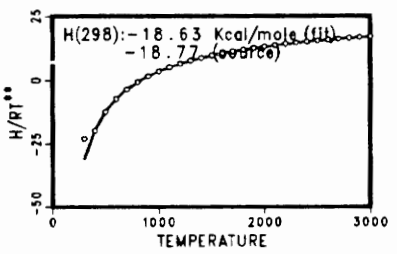
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

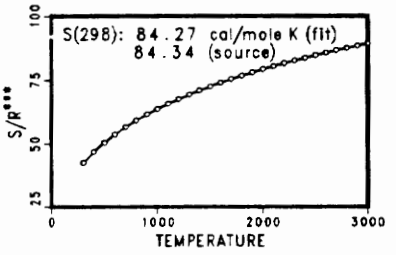
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SI(NH2)3 TRIAMINOSILYL GAS As of: 4/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.07598413E+02	0.02435266E+00	-0.04296202E-04	-0.01756006E-06	0.10501017E-10	-0.12653434E+05	-0.07808647E+02
1000-3000K	0.14065501E+02	0.07581744E-01	-0.05168510E-05	-0.06743626E-08	0.13979258E-12	-0.14144028E+05	-0.04063873E+03







Source: SNLL FIT TO BAC-MP4 DATA

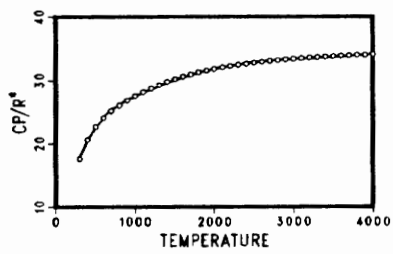
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

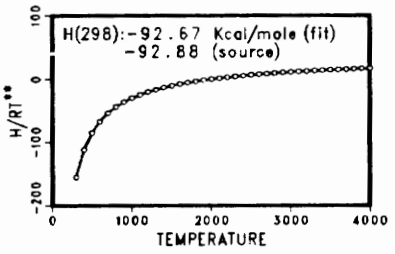
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

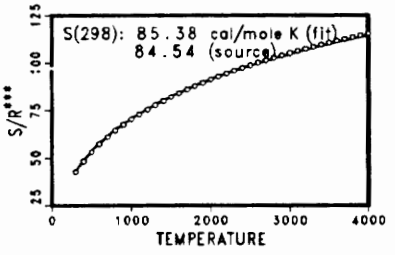
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SI(NH2)4 TETRAAMINOSILANE GAS As of: 2/27/90

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.08454529E+02	0.03465772E+00	-0.04266782E-04	-0.02495363E-06	0.13654663E-10	-0.05061518E+06	-0.15143013E+02
1000-4000K	0.02032107E+03	0.08289798E-01	-0.07077612E-05	-0.04340724E-08	0.07747068E-12	-0.05389855E+06	-0.07730464E+03







Source: SNL FIT TO BAC-MP4 DATA

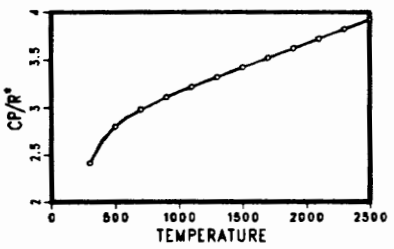
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

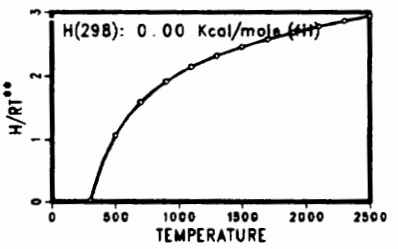
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

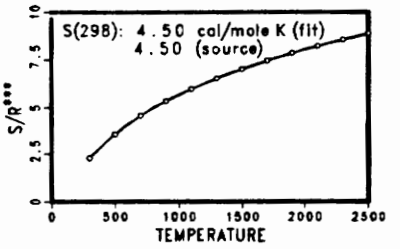
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SI(S) SILICON SOLID As of: 9/05/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.05746418E+01	0.10264855E-01	-0.01775345E-03	0.14575000E-07	-0.04491292E-10	-0.04969951E+04	-0.03400242E+02
1000-2500K	0.02530275E+02	0.08522433E-02	-0.03223468E-05	0.12808208E-09	-0.01850849E-12	-0.08395197E+04	-0.12514782E+02







Source: SNLL FIT TO JANAF TABLES

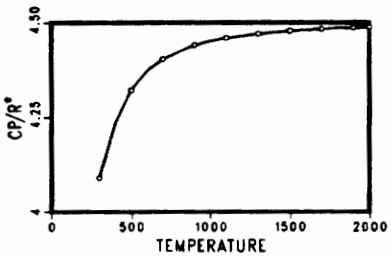
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

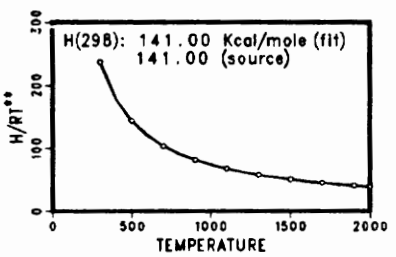
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

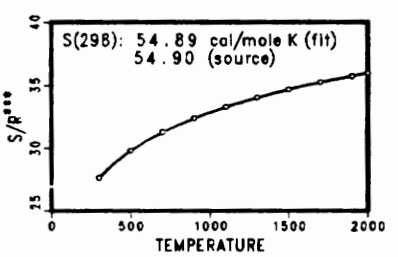
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SI2 SILICON, DIATOMIC GAS As of: 9/05/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02993750E+02	0.06053689E-01	-0.10158575E-04	0.07909737E-07	-0.02346083E-10	0.06987498E+06	0.09151741E+02
1000-2000K	0.04232196E+02	0.04315355E-02	-0.02964833E-05	0.09823294E-09	-0.12962688E-13	0.06964651E+06	0.03308527E+02







Source: SNLL FIT TO DATA GENERATE USING VIBRATIONAL FREQUENCIES

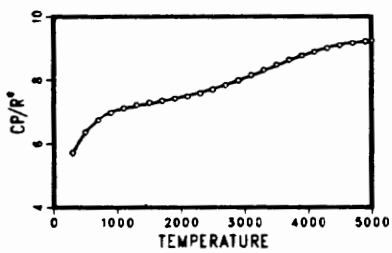
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

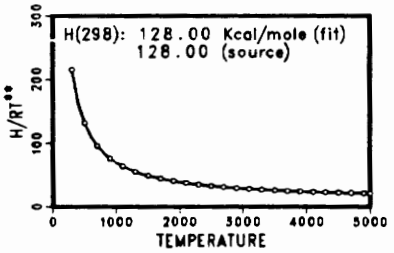
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

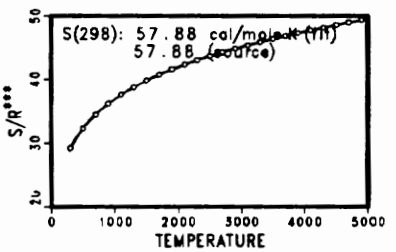
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SI2C DISILICON CARBIDE GAS As of: 11/29/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04157246E+02	0.07031825E-01	-0.07263033E-04	0.04633583E-07	-0.14934475E-11	0.06292421E+06	0.03635125E+02
1000-5000K	0.06334110E+02	0.12102520E-02	-0.06798289E-05	0.02244432E-08	-0.02280177E-12	0.06227189E+06	-0.07770097E+02







Source: SNLL FIT TO JANNAF DATA

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

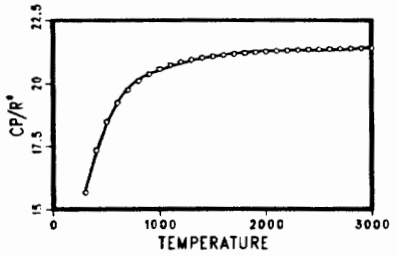
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

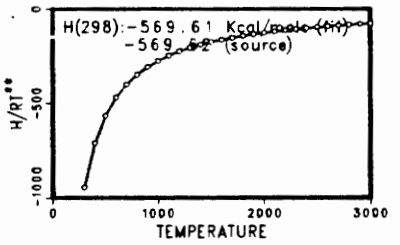
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

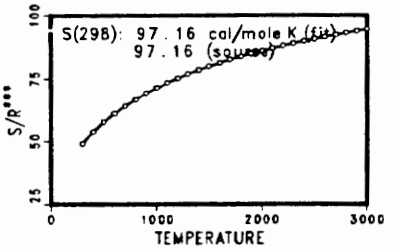
Species: SI2F6 HEXAFLUORODISILANE GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.09998134E+02	0.02170313E+00	-0.03875091E-04	-0.16702523E-07	0.09407529E-10	-0.02905482E+07	-0.14228863E+02
1000-3000K	0.01830047E+03	0.02868752E-01	-0.04545576E-05	-0.02497900E-08	0.06630658E-12	-0.02928185E+07	-0.05760425E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

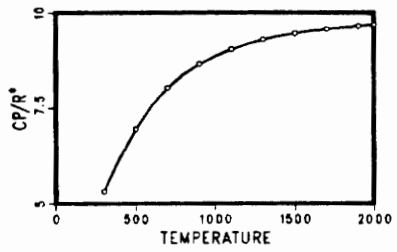
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

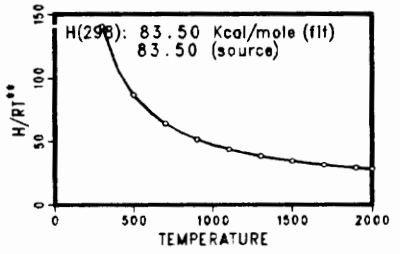
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

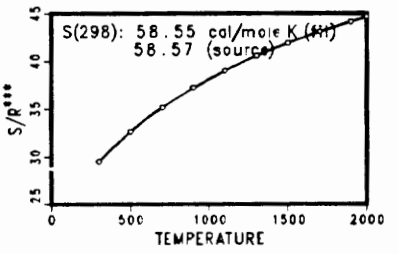
Species: SI2H2 GAS As of: 9/05/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.16247229E+01	0.14871029E-01	-0.08707160E-04	-0.01699554E-09	0.10972211E-11	0.04095325E+06	0.16165730E+02
1000-2000K	0.05778180E+02	0.04070596E-01	-0.04259125E-05	-0.07920228E-08	0.02379752E-11	0.03980520E+06	-0.05392375E+02







Source: SNLL FIT TO DATA GENERATED USING VIBRATIONAL FREQUENCIES

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

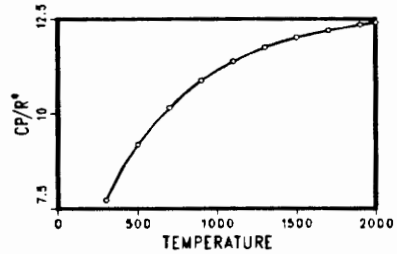
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

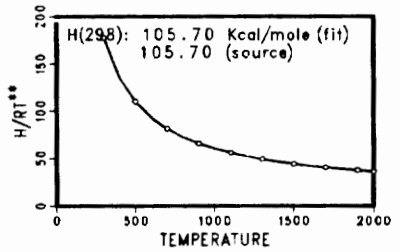
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

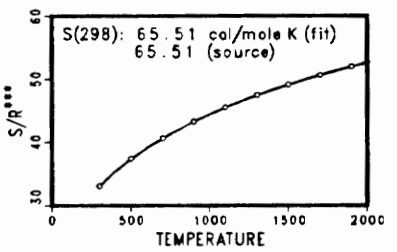
Species: SI2H3 GAS As of: 9/05/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03335404E+02	0.02155614E+00	-0.02933937E-03	0.02287784E-06	-0.07272827E-10	0.05146157E+06	0.08656853E+02
1000-2000K	0.07257627E+02	0.05123859E-01	-0.07633465E-05	-0.06662471E-08	0.02053052E-11	0.05062055E+06	-0.10314127E+02







Source: SNLL FIT TO DATA GENERATED USING VIBRATIONAL FREQUENCIES

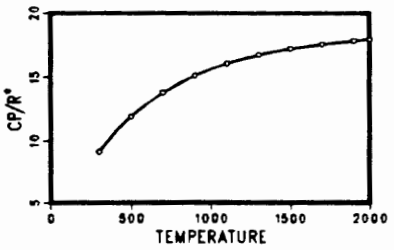
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

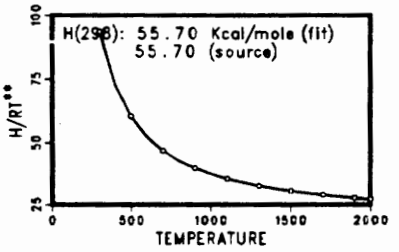
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

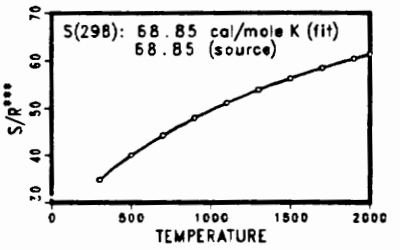
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SI2H5 GAS As of: 9/05/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.15788481E+01	0.03549382E+00	-0.04267511E-03	0.03059177E-06	-0.09360425E-10	0.02630549E+06	0.16720734E+02
1000-2000K	0.08451010E+02	0.09286371E-01	-0.10911831E-05	-0.14423673E-08	0.04250824E-11	0.02472718E+06	-0.01710331E+03







Source: SNLL FIT TO DATA GENERATED USING VIBRATIONAL FREQUENCIES

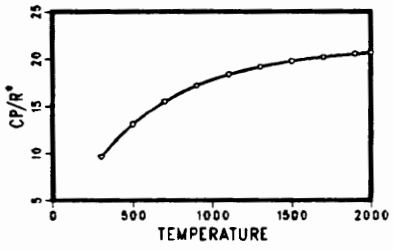
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

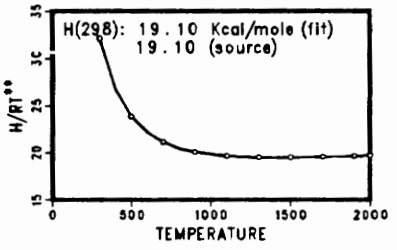
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

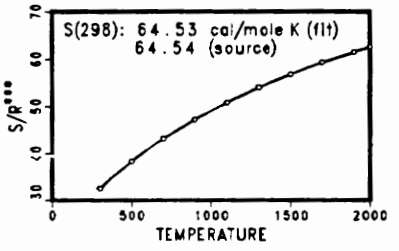
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SI2H6 GAS As of: 9/05/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.05301921E+01	0.04184055E+00	-0.04685249E-03	0.03179525E-06	-0.09484526E-10	0.07950597E+05	0.01880453E+03
1000-2000K	0.08882090E+02	0.11513955E-01	-0.12162159E-05	-0.01905085E-07	0.05542379E-11	0.05967241E+05	-0.02265611E+03







Source: SNLL FIT TO DATA GENERATED USING VIBRATIONAL FREQUENCIES

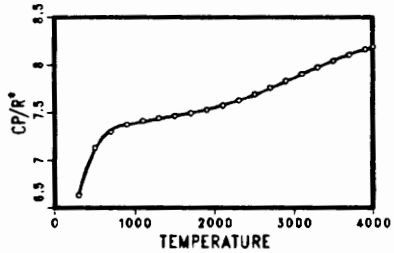
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

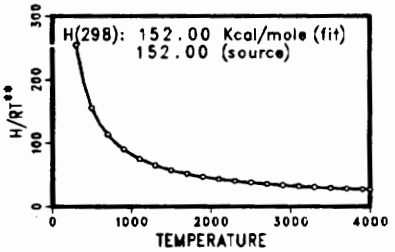
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

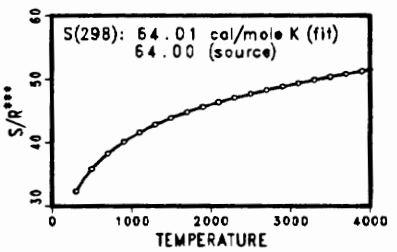
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SI3 SILICON, TRIATOMIC GAS As of: 3/29/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.05312161E+02	0.05920180E-01	-0.05075224E-04	0.05303866E-08	0.07031630E-11	0.07469501E+06	0.04036452E+01
1000-4000K	0.07021584E+02	0.06981538E-02	-0.04818729E-05	0.01720754E-08	-0.01927024E-12	0.07429956E+06	-0.08179232E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

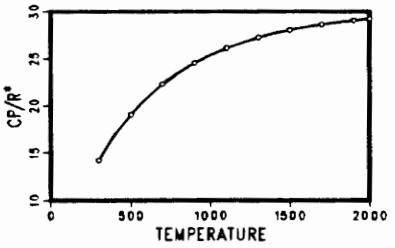
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

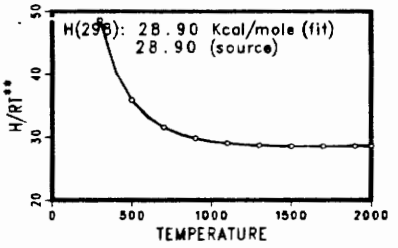
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

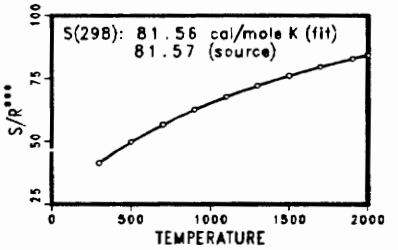
Species: SI3H8 GAS As of: 9/05/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.06319791E+01	0.06412995E+00	-0.07772444E-03	0.05486969E-06	-0.16460971E-10	0.12092580E+05	0.02133318E+03
1000-2000K	0.13422770E+02	0.15636323E-01	-0.01936565E-04	-0.02388329E-07	0.07120030E-11	0.09165887E+05	-0.04163000E+03







Source: SNLL FIT TO DATA GENERATED USING VIBRATIONAL FREQUENCIES

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

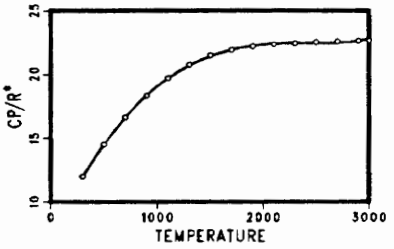
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

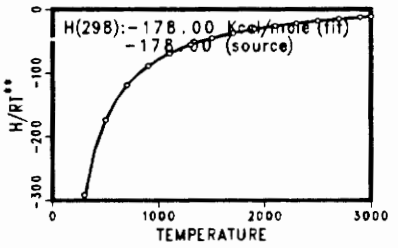
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

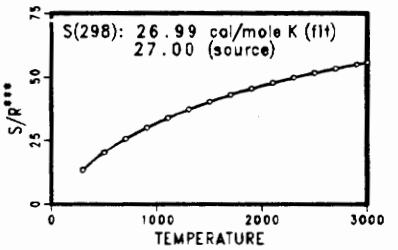
Species: SI3N4(A) SILICON NITRIDE, ALPHA SOLID As of: 4/25/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.06631384E+02	0.02293928E+00	-0.02152875E-03	0.01766237E-06	-0.06632214E-10	-0.09241684E+06	-0.03021795E+03
1000-3000K	0.09667453E+02	0.11927212E-01	-0.01709281E-04	-0.10846074E-08	0.02713018E-11	-0.09324734E+06	-0.04556492E+03







Source: SNLL FIT TO JANAF TABLES

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

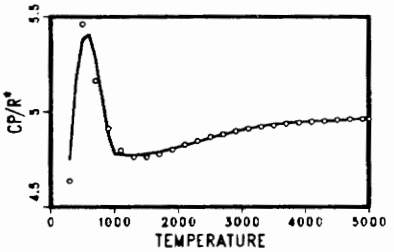
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

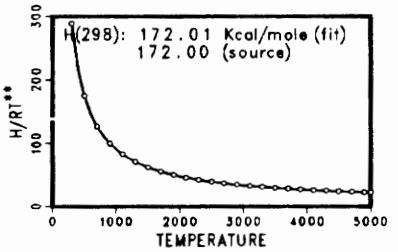
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

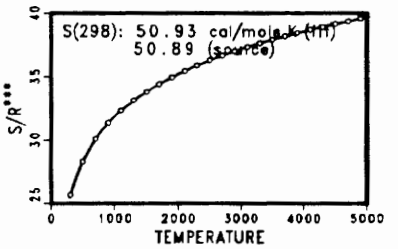
Species: SIC SILICON CARBIDE GAS As of: 11/29/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02427812E+02	0.09551934E-01	-0.02796633E-04	-0.13600122E-07	0.09196322E-10	0.08546512E+06	0.09179253E+02
1000-5000K	0.05024270E+02	-0.04920894E-02	0.03109315E-05	-0.06901344E-09	0.05215735E-13	0.08531026E+06	-0.02478798E+02







Source: SNLL FIT TO JANNAF DATA

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

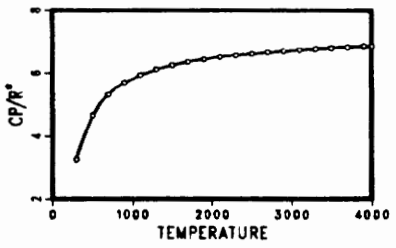
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

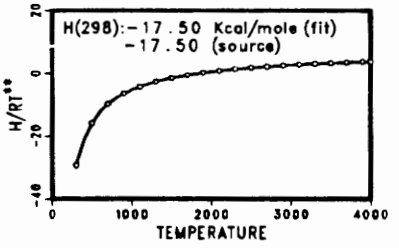
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

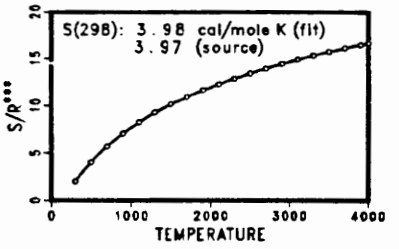
Species: SIC(B) SILICON CARBIDE, BETA SOLID As of: 11/29/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	-0.03551395E+01	0.15998806E-01	-0.13933268E-04	0.03314914E-07	0.07825957E-11	-0.09294352E+05	-0.15153885E+00
1000-4000K	0.03548056E+02	0.03636817E-01	-0.01734872E-04	0.03912869E-08	-0.03337952E-12	-0.10188585E+05	-0.01967253E+03







Source: SNLL FIT TO JANNAF DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

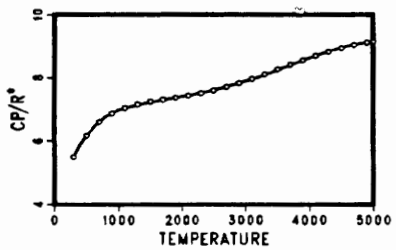
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

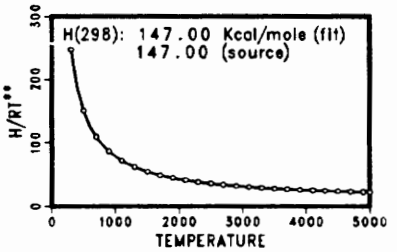
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

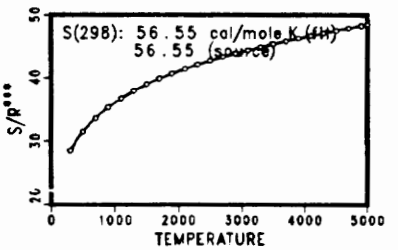
Species: SIC2 SILICON DICARBIDE GAS As of: 11/29/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03647724E+02	0.08765100E-01	-0.10798686E-04	0.07974287E-07	-0.02617042E-10	0.07258578E+06	0.05481049E+02
1000-5000K	0.05753725E+02	0.02067546E-01	-0.11325346E-05	0.03106456E-08	-0.02799936E-12	0.07200461E+06	-0.05294926E+02







Source: SNLL FIT TO JANNAF DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

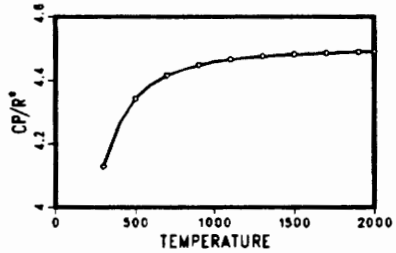
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

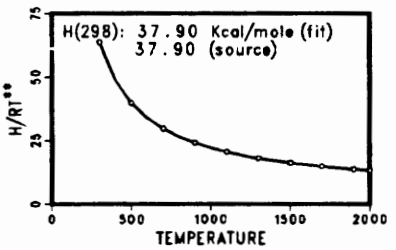
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

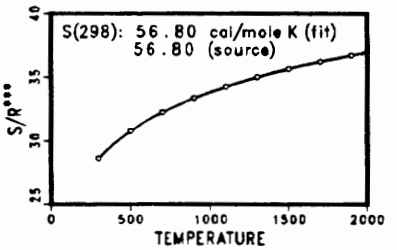
Species: SICL SILICON MONOCHLORIDE GAS As of: 12/19/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03096406E+02	0.05738623E-01	-0.09740903E-04	0.07643597E-07	-0.02279178E-10	0.01796794E+06	0.09603212E+02
1000-2000K	0.04258459E+02	0.04020317E-02	-0.02888145E-05	0.10097771E-09	-0.14110117E-13	0.01775613E+06	0.04134521E+02







Source: SNLL FIT TO DATA GENERATED USING VIBRATIONAL FREQUENCIES

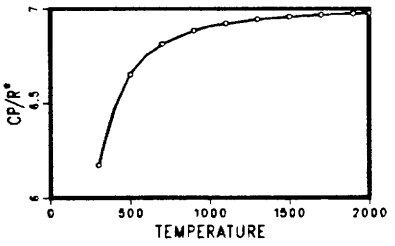
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

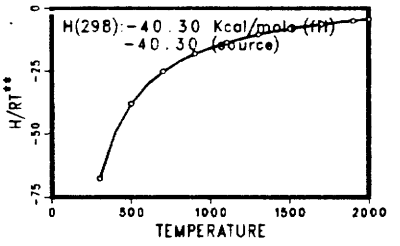
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

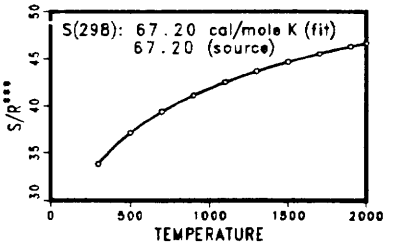
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SICL2 DICHLOROSILYLENE GAS As of: 12/19/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03826666E+02	0.13082964E-01	-0.02234087E-03	0.01760741E-06	-0.05267404E-10	-0.02183869E+06	0.08965448E+02
1000-2000K	0.06491204E+02	0.08242384E-02	-0.05767737E-05	0.01972405E-08	-0.02713757E-12	-0.02232408E+06	-0.03570531E+02







Source: SNLL FIT TO DATA GENERATED USING VIBRATIONAL FREQUENCIES

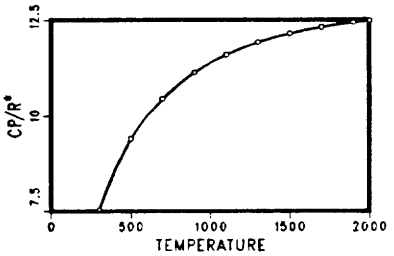
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

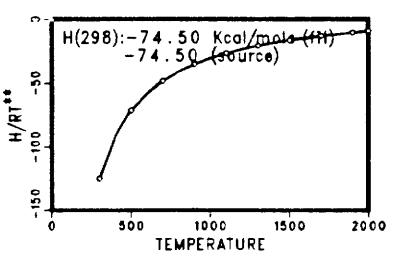
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

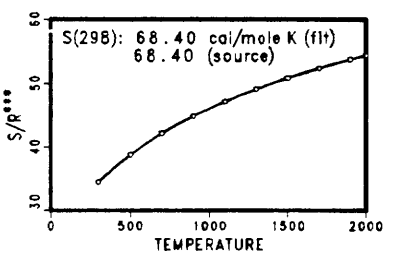
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SICL2H2 DICHLOROSILANE GAS As of: 12/19/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.11002086E+01	0.03262361E+00	-0.04691994E-03	0.03494565E-06	-0.10362847E-10	-0.03892086E+06	0.02022693E+03
1000-2000K	0.07727079E+02	0.05034188E-01	-0.10957459E-05	-0.04419587E-08	0.16311241E-12	-0.04028605E+06	-0.11708156E+02







Source: SNLL FIT TO DATA GENERATED USING VIBRATIONAL FREQUENCIES

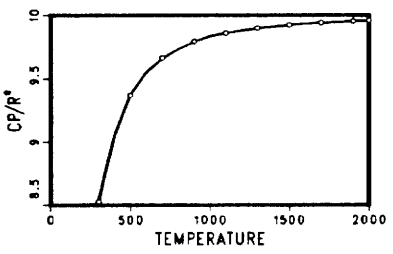
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

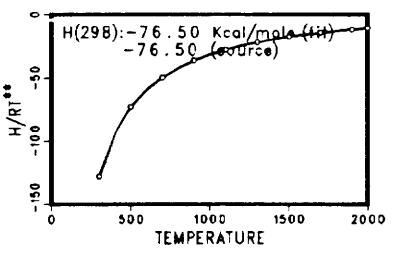
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

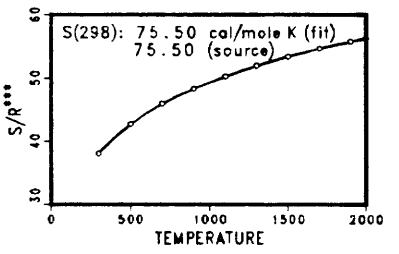
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SICL3 TRICHLOROSILYL RADICAL GAS As of: 12/19/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04485690E+02	0.02241754E+00	-0.03794196E-03	0.02973183E-06	-0.08861335E-10	-0.04055264E+06	0.07198771E+02
1000-2000K	0.09098097E+02	0.14053526E-02	-0.09317005E-05	0.02982296E-08	-0.03822010E-12	-0.04140193E+06	-0.14550117E+02







Source: SNLL FIT TO DATA GENERATED USING VIBRATIONAL FREQUENCIES

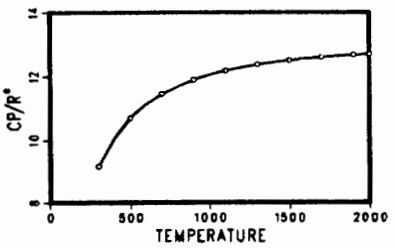
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

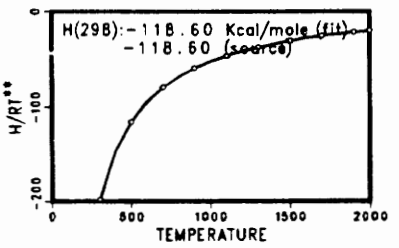
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

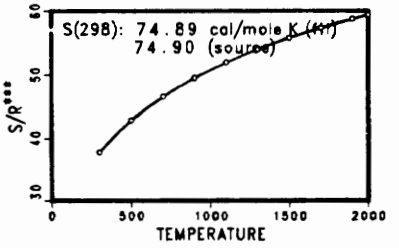
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SICL3H TRICHLOROSILANE GAS As of: 12/19/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02883769E+02	0.03308240E+00	-0.05169241E-03	0.03949918E-06	-0.11721043E-10	-0.06163323E+06	0.13374664E+02
1000-2000K	0.09663121E+02	0.03563367E-01	-0.12149114E-05	-0.16090094E-10	0.05641710E-12	-0.06295557E+06	-0.01894777E+03







Source: SNLL FIT TO DATA GENERATED USING VIBRATIONAL FREQUENCIES

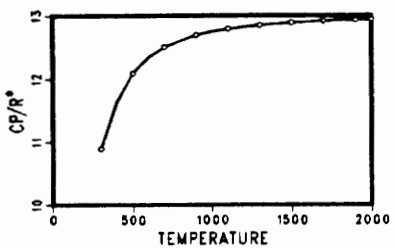
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

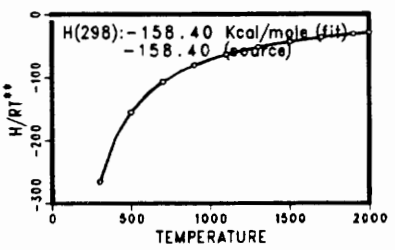
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

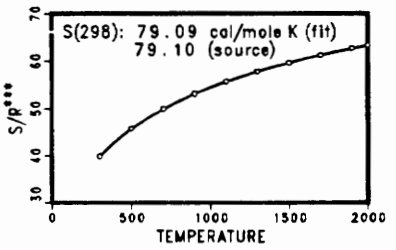
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SICL4 TETRACHLOROSILANE GAS As of: 12/19/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.05252110E+02	0.03122067E+00	-0.05254593E-03	0.04102707E-06	-0.12199071E-10	-0.08228177E+06	0.02575727E+02
1000-2000K	0.11709377E+02	0.01972091E-01	-0.12690771E-05	0.03900188E-08	-0.04756468E-12	-0.08347808E+06	-0.02791153E+03







Source: SNLL FIT TO DATA GENERATED USING VIBRATIONAL FREQUENCIES

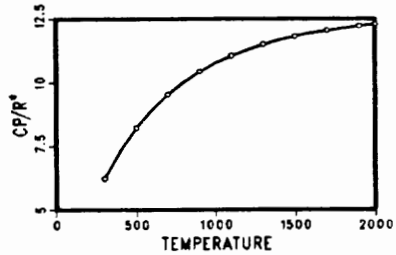
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

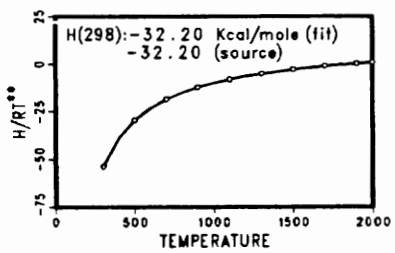
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

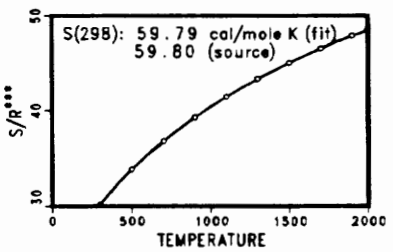
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SICLH3 CHLOROSILANE GAS As of: 12/19/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.05057173E+01	0.02703377E+00	-0.03301474E-03	0.02302732E-06	-0.06778703E-10	-0.01730819E+06	0.02043167E+03
1000-2000K	0.05964237E+02	0.06278087E-01	-0.08205634E-05	-0.09280558E-08	0.02796642E-11	-0.01854309E+06	-0.06395305E+02







Source: SNLL FIT TO DATA GENERATED USING VIBRATIONAL FREQUENCIES

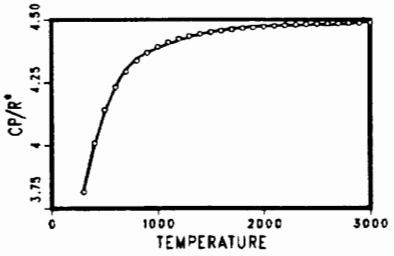
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

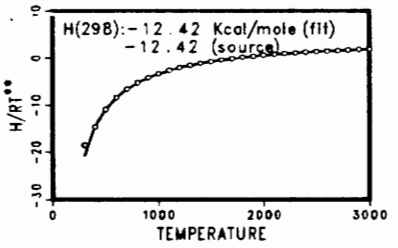
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

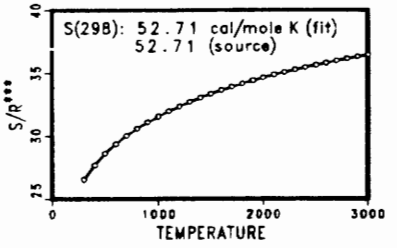
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SIF FLUOROSILYLIDYNE GAS As of: 4/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03144947E+02	0.02588557E-01	-0.05795912E-05	-0.01807278E-07	0.10411718E-11	-0.07294439E+05	0.07876774E+02
1000-3000K	0.04120066E+02	0.03548820E-02	-0.07200222E-06	-0.02190434E-09	0.06764591E-13	-0.07561378E+05	0.02784246E+02







Source: SNLL FIT TO BAC-MP4 DATA

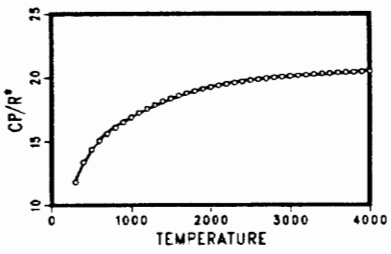
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

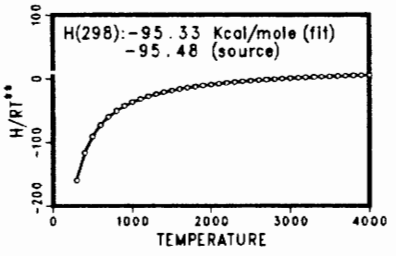
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

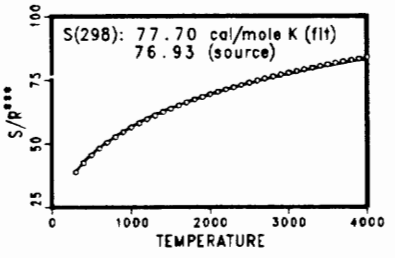
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SIF(NH2)2 DIAMINOFLUOROSILYL RADICAL GAS As of: 2/27/90

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.07210094E+02	0.01764697E+00	-0.02542059E-04	-0.12422138E-07	0.06989787E-10	-0.05086706E+06	-0.07024622E+02
1000-4000K	0.12879436E+02	0.04598535E-01	-0.04004440E-05	-0.02374189E-08	0.04255211E-12	-0.05238278E+06	-0.03653418E+03







Source: SNL FIT TO BAC-MP4 DATA

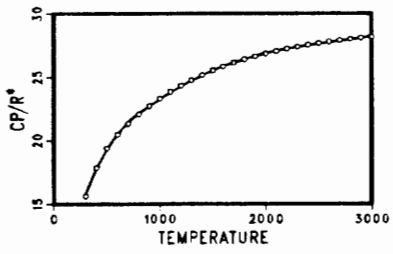
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

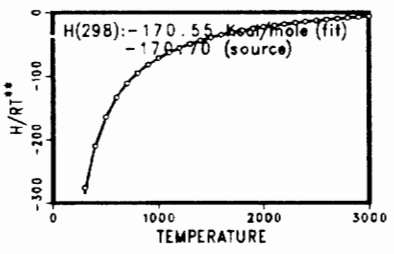
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

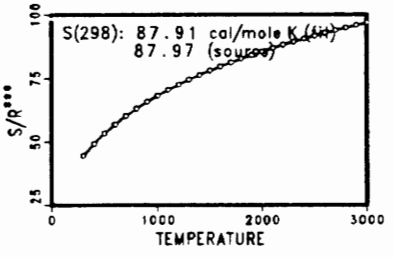
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SIF(NH2)3 TRIAMINOFLUOROSILANE GAS As of: 4/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.08388268E+02	0.02746622E+00	-0.04455674E-04	-0.01955732E-06	0.11407210E-10	-0.08947806E+06	-0.11381777E+02
1000-3000K	0.16111795E+02	0.08329222E-01	-0.06023787E-05	-0.07470125E-08	0.15707311E-12	-0.09137007E+06	-0.05098123E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

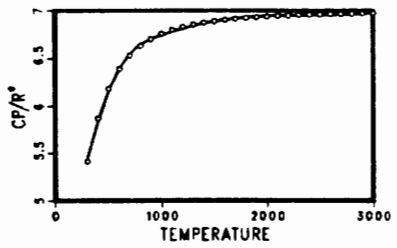
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

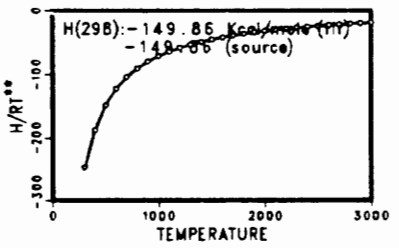
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

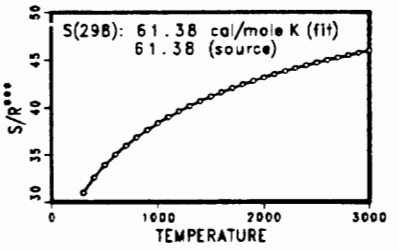
Species: SIF2 DIFLUOROSILYLENE GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03845345E+02	0.06038465E-01	-0.11677323E-05	-0.04579553E-07	0.02607414E-10	-0.07681633E+06	0.07272983E+02
1000-3000K	0.06142470E+02	0.07807974E-02	-0.13393119E-06	-0.06264839E-09	0.01725138E-12	-0.07744042E+06	-0.04712327E+02







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

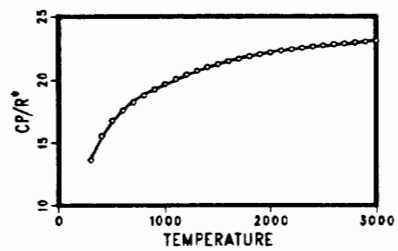
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

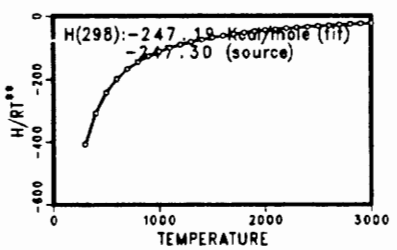
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

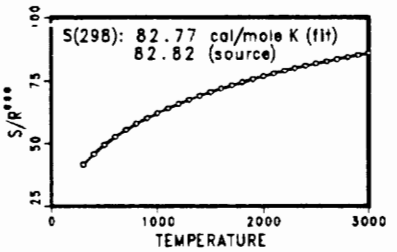
Species: SIF2(NH2)2 DIFLUORODIAMINOSILANE GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.07634268E+02	0.02315843E+00	-0.04193827E-04	-0.01715350E-06	0.10164619E-10	-0.12764102E+06	-0.08419031E+02
1000-3000K	0.14414775E+02	0.06110646E-01	-0.04871145E-05	-0.05455935E-08	0.11727140E-12	-0.12927572E+06	-0.04308682E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

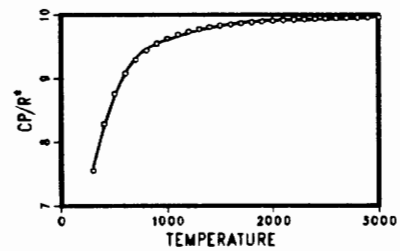
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

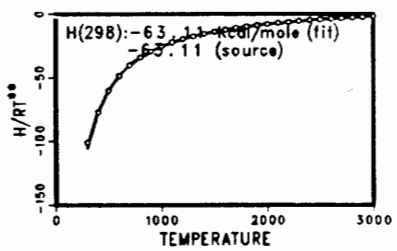
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

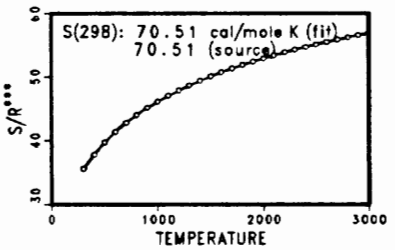
Species: SIF2N GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.05102583E+02	0.09456606E-01	-0.01819383E-04	-0.07309616E-07	0.04178902E-10	-0.03367293E+06	0.03734423E+02
1000-3000K	0.08687337E+02	0.11934885E-02	-0.01992660E-05	-0.09951333E-09	0.02704383E-12	-0.03463832E+06	-0.14940526E+02







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

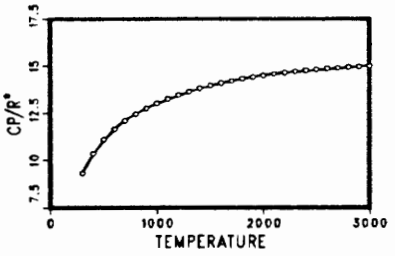
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

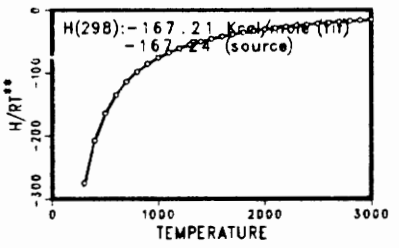
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

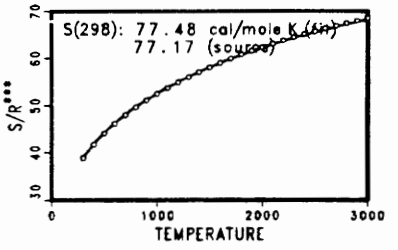
Species: SIF2NH2 DIFLUOROAMINOSILYL GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.05890444E+02	0.12851282E-01	-0.01863556E-04	-0.08718963E-07	0.04848951E-10	-0.08644527E+06	0.01756162E+02
1000-3000K	0.09872415E+02	0.03722112E-01	-0.03271338E-05	-0.03321674E-08	0.07293692E-12	-0.08751628E+06	-0.01899095E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

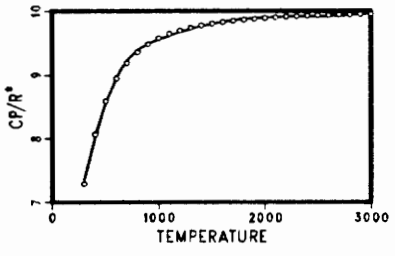
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

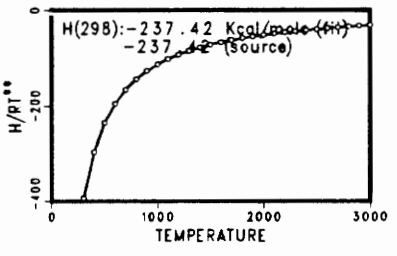
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

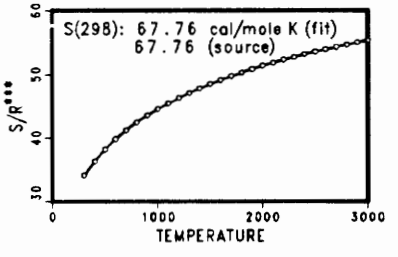
Species: SIF3 TRIFLUOROSILYL GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04662868E+02	0.10087878E-01	-0.01805544E-04	-0.07769299E-07	0.04377851E-10	-0.12129652E+06	0.04672966E+02
1000-3000K	0.08524790E+02	0.13237924E-02	-0.02104278E-05	-0.11495040E-09	0.03055301E-12	-0.12235223E+06	-0.15502343E+02







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

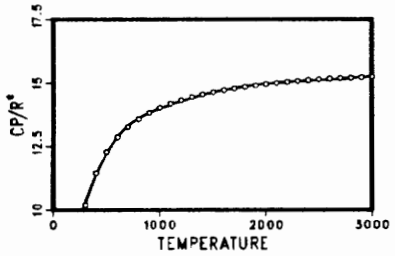
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

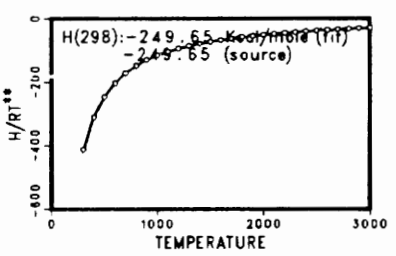
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

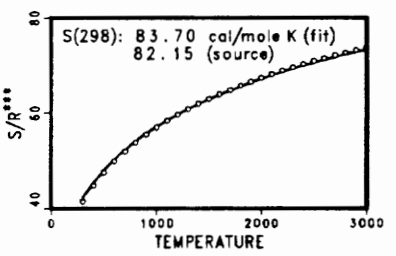
Species: SIF3NH TRIFLUOROSILYLAMIDOGEN GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.06013822E+02	0.15977294E-01	-0.02791466E-04	-0.12141200E-07	0.06927415E-10	-0.12809741E+06	0.03316770E+02
1000-3000K	0.11637665E+02	0.02880768E-01	-0.03357310E-05	-0.02584594E-08	0.06162371E-12	-0.12958909E+06	-0.02590717E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

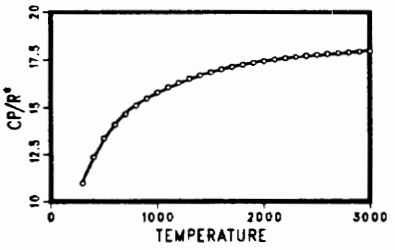
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

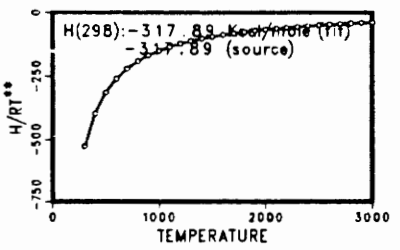
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

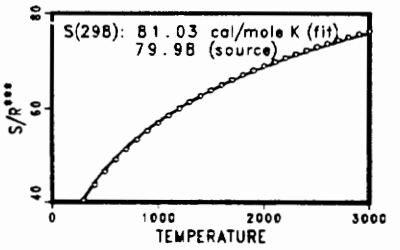
Species: SIF3NH2 TRIFLUOROSILYLAMINE GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.06229403E+02	0.01778015E+00	-0.02612304E-04	-0.12672434E-07	0.07044556E-10	-0.16256489E+06	0.02045440E+01
1000-3000K	0.12109636E+02	0.04383282E-01	-0.04142245E-05	-0.03989090E-08	0.08958954E-12	-0.16417679E+06	-0.03046928E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

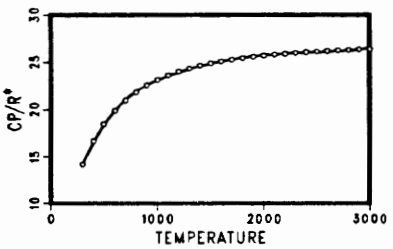
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

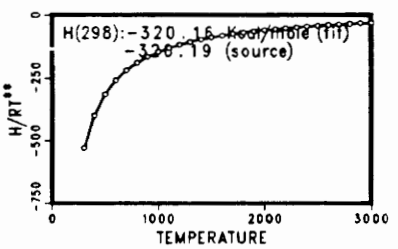
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

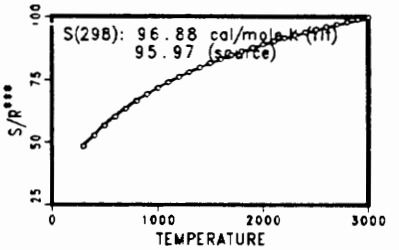
Species: SIF3NHSIH3 TRIFLUOROSILYL-SILYLAMINE GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.06216046E+02	0.02939330E+00	-0.02717745E-04	-0.01982877E-06	0.10027676E-10	-0.16422818E+06	0.04858261E+02
1000-3000K	0.16699406E+02	0.07789784E-01	-0.08110570E-05	-0.07650199E-08	0.01773956E-11	-0.16734123E+06	-0.05080007E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

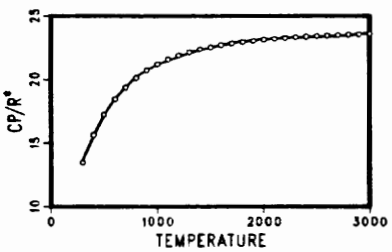
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

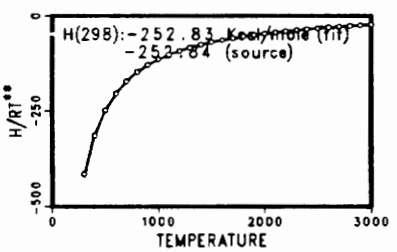
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

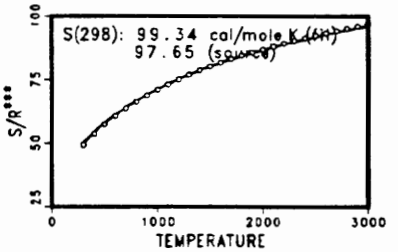
Species: SIF3NSIH3 TRIFLUOROSILYL-SILYLAMIDOGEN GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.06404371E+02	0.02601982E+00	-0.02491543E-04	-0.01769542E-06	0.08919883E-10	-0.13025197E+06	0.06002945E+02
1000-3000K	0.15991462E+02	0.06371085E-01	-0.07256823E-05	-0.06292690E-08	0.14951566E-12	-0.13311576E+06	-0.04495265E+03







Source: SNLL FIT TO BAC-MP4 DATA

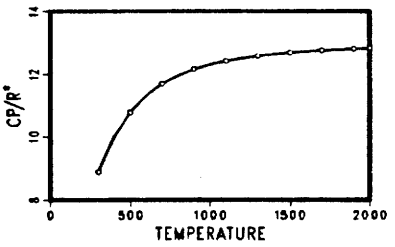
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

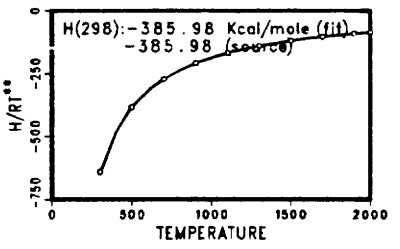
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

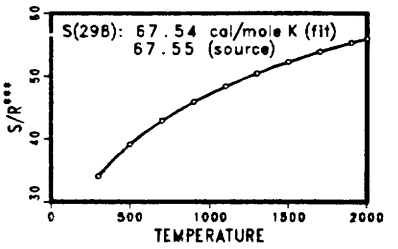
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SIF4 SILICON TETRAFLUORIDE GAS As of: 4/13/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02147416E+02	0.03402219E+00	-0.04756873E-03	0.03252196E-06	-0.08819304E-10	-0.01960449E+07	0.13463150E+02
1000-2000K	0.09985301E+02	0.03532637E-01	-0.11973776E-05	-0.10365486E-09	0.08661585E-12	-0.01977199E+07	-0.02472643E+03







Source: SNLL FIT TO JANAF TABLES

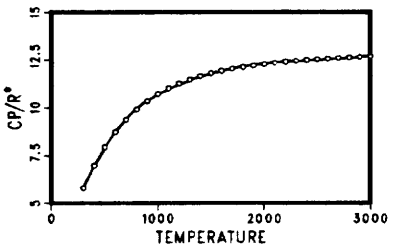
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

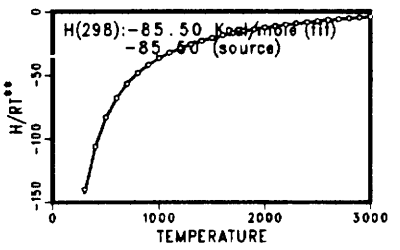
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

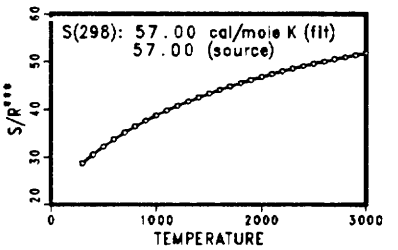
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SIFH3 FLUOROSILANE GAS As of: 4/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02032189E+02	0.13413632E-01	-0.02806381E-05	-0.07803291E-07	0.03337474E-10	-0.04421627E+06	0.13187677E+02
1000-3000K	0.06799678E+02	0.04747086E-01	-0.04767066E-05	-0.04814665E-08	0.11077613E-12	-0.04577024E+06	-0.12614326E+02







Source: SNLL FIT TO BAC-MP4 DATA

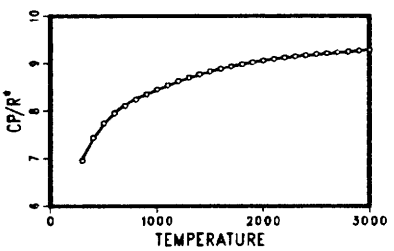
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

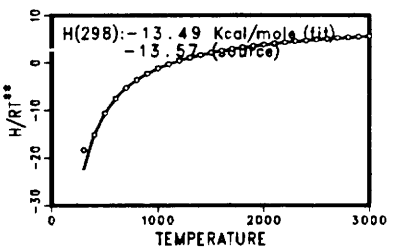
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

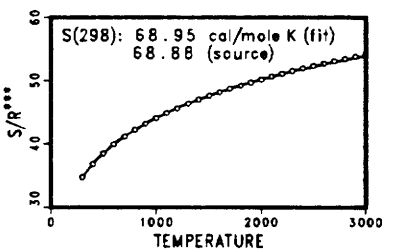
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SIFNH GAS As of: 4/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.05390691E+02	0.06071319E-01	-0.13594903E-05	-0.04267435E-07	0.02603153E-10	-0.08644237E+05	0.02272064E+02
1000-3000K	0.07163298E+02	0.15213245E-02	-0.15363371E-06	-0.11959331E-09	0.02684099E-12	-0.09065496E+05	-0.06764144E+02







Source: SNLL FIT TO BAC-MP4 DATA

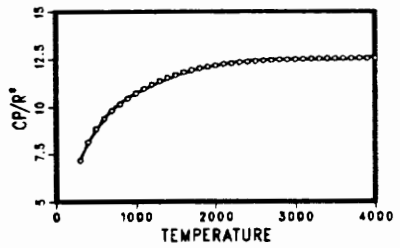
* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

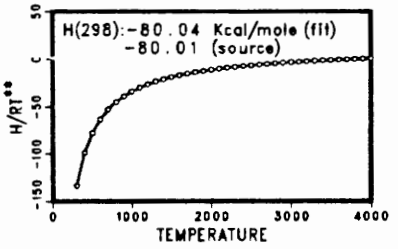
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

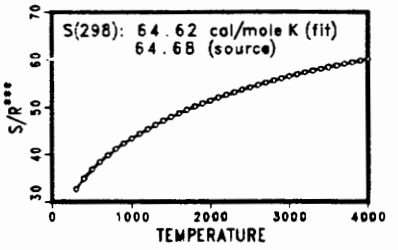
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SIFNH2 AMINOFLUOROSILYLENE GAS As of: 2/27/90

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.04214050E+02	0.11054231E-01	-0.10147254E-05	-0.07143728E-07	0.03634922E-10	-0.04200629E+06	0.05318889E+02
1000-4000K	0.08017582E+02	0.03209103E-01	-0.03361364E-05	-0.01796536E-08	0.03385552E-12	-0.04313426E+06	-0.14870236E+02







Source: SNL FIT TO BAC-MP4 DATA

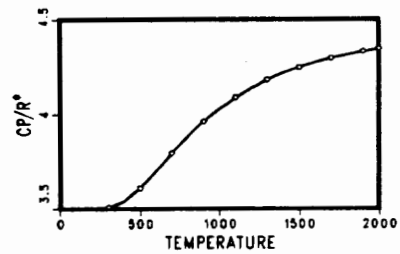
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

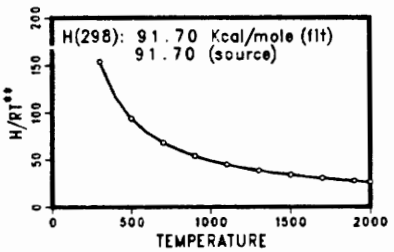
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

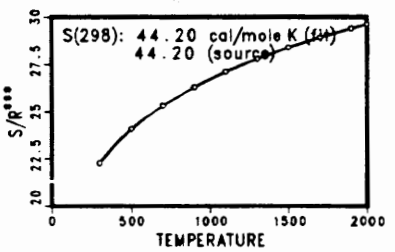
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SIH SILICON MONOHYDRIDE GAS As of: 12/19/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03836009E+02	-0.02702656E-01	0.06849070E-04	-0.05424184E-07	0.14721313E-11	0.04507593E+06	0.09350778E+01
1000-2000K	0.03110430E+02	0.10949460E-02	0.02898628E-06	-0.02745104E-08	0.07051799E-12	0.04516897E+06	0.04193487E+02







Source: SNLL FIT TO DATA GENERATED USING VIBRATIONAL FREQUENCIES

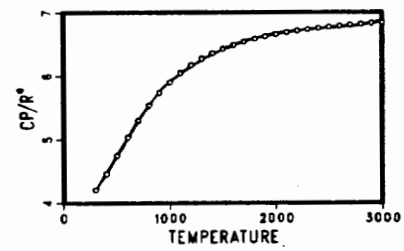
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

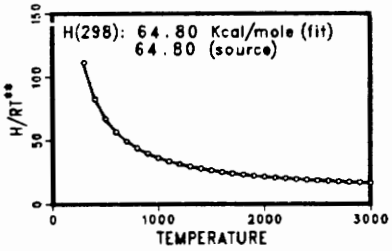
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

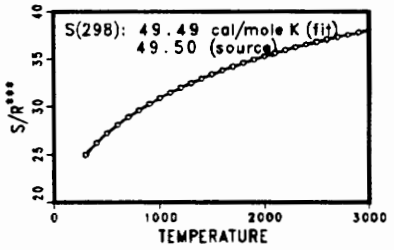
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SIH2 SILYLENE GAS As of: 4/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03475092E+02	0.02139338E-01	0.07672305E-05	0.05217668E-08	-0.09898824E-11	0.03147397E+06	0.04436585E+02
1000-3000K	0.04142390E+02	0.02150191E-01	-0.02190730E-05	-0.02073725E-08	0.04741018E-12	0.03110483E+06	0.02930745E+01







Source: SNLL FIT TO BAC-MP4 DATA

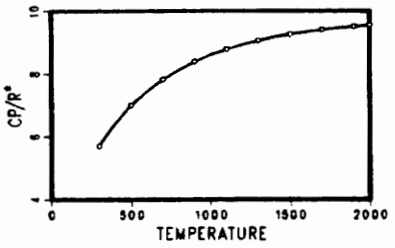
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

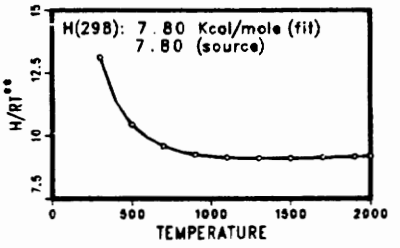
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

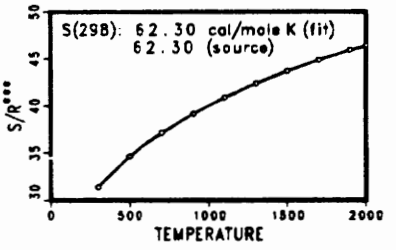
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SIH2CL CHLOROSILYL RADICAL GAS As of: 12/19/86

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.01699256E+02	0.01961407E+00	-0.02622973E-03	0.01936416E-06	-0.05846399E-10	0.02743661E+05	0.01683132E+03
1000-2000K	0.05555901E+02	0.04046479E-01	-0.06581751E-05	-0.05027548E-08	0.15991101E-12	0.0191242BE+05	-0.01906889E+02







Source: SNLL FIT TO DATA GENERATED USING VIBRATIONAL FREQUENCIES

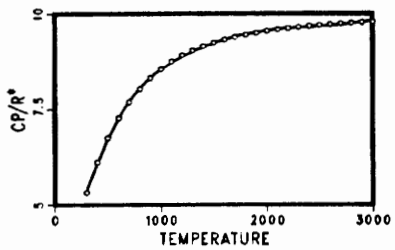
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

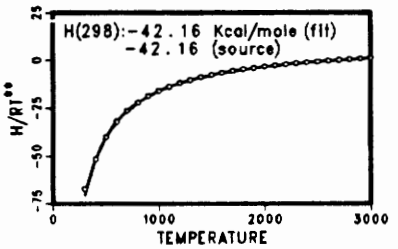
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

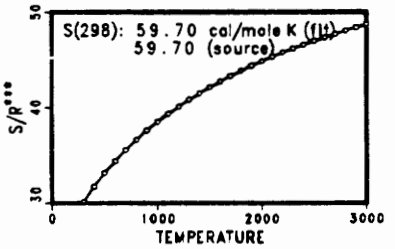
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SIH2F FLUOROSILYL GAS As of: 4/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02782566E+02	0.09148257E-01	-0.04186787E-05	-0.05388971E-07	0.02412133E-10	-0.02244201E+06	0.11528536E+02
1000-3000K	0.06020398E+02	0.03074039E-01	-0.03248886E-05	-0.03052243E-08	0.07098090E-12	-0.02347670E+06	-0.05919595E+02







Source: SNLL FIT TO BAC-MP4 DATA

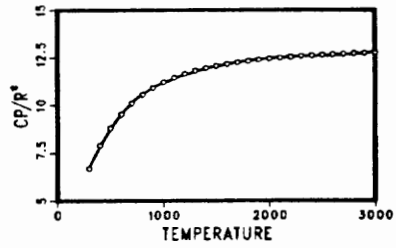
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

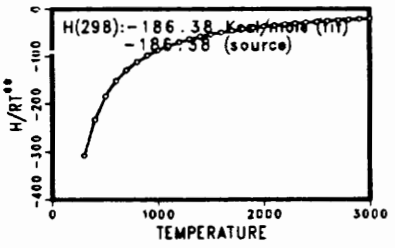
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

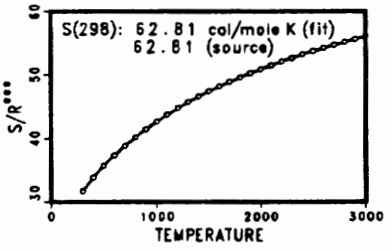
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SIH2F2 DIFLUOROSILANE GAS As of: 4/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02701455E+02	0.14565451E-01	-0.11633003E-05	-0.09685830E-07	0.04769590E-10	-0.09522440E+06	0.12006887E+02
1000-3000K	0.07997762E+02	0.03911538E-01	-0.04222679E-05	-0.03913812E-08	0.09171569E-12	-0.09682880E+06	-0.16223999E+02







Source: SNLL FIT TO BAC-MP4 DATA

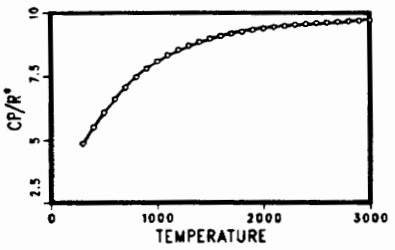
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

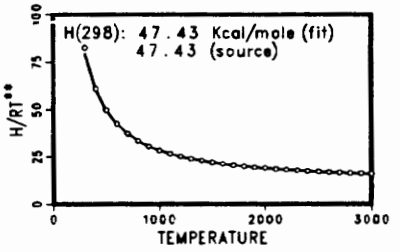
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

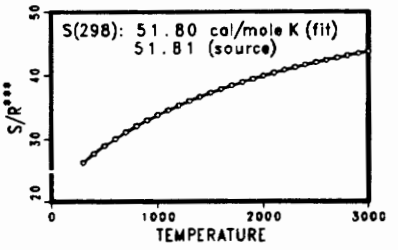
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SIH3 SILYL RADICAL GAS As of: 4/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02946733E+02	0.06466763E-01	0.05991653E-05	-0.02218413E-07	0.03052669E-11	0.02270173E+06	0.07347948E+02
1000-3000K	0.05015906E+02	0.03732750E-01	-0.03609053E-05	-0.03729193E-08	0.08468491E-12	0.02190233E+06	-0.04291368E+02







Source: SNLL FIT TO BAC-MP4 DATA

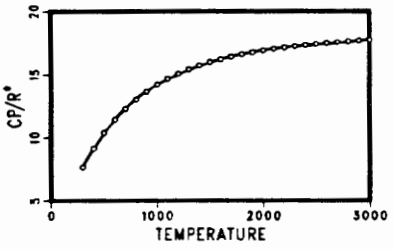
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

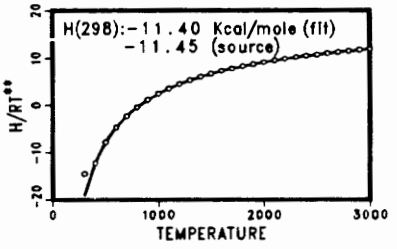
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

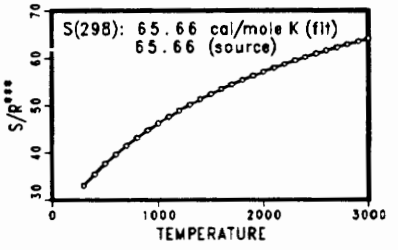
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SIH3NH2 SILYLAMINE GAS As of: 4/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02936348E+02	0.16747041E-01	-0.03232858E-05	-0.09171970E-07	0.03979516E-10	-0.07334716E+05	0.11414373E+02
1000-3000K	0.08109945E+02	0.07215752E-01	-0.06052251E-05	-0.07086088E-08	0.15578638E-12	-0.08999782E+05	-0.16516504E+02







Source: SNLL FIT TO BAC-MP4 DATA

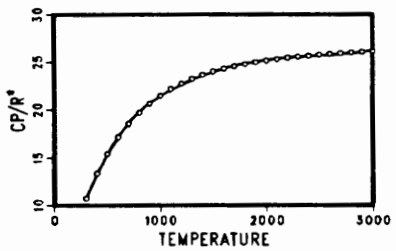
* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

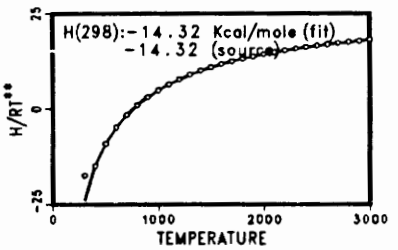
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

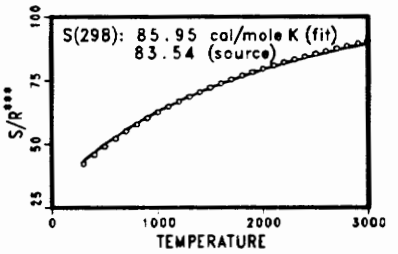
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

Species: SIH3NHSIH3 DISILYLAMINE GAS As of: 4/24/89

Fit Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02468749E+02	0.02940254E+00	-0.06248179E-05	-0.01731461E-06	0.07545261E-10	-0.09209690E+05	0.02059559E+03
1000-3000K	0.12652963E+02	0.10667481E-01	-0.10073358E-05	-0.10812221E-08	0.02452363E-11	-0.12497210E+05	-0.03441428E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

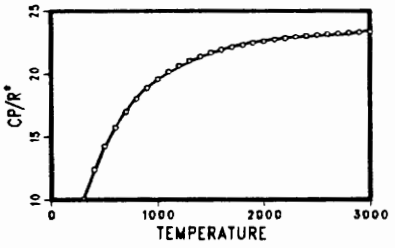
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

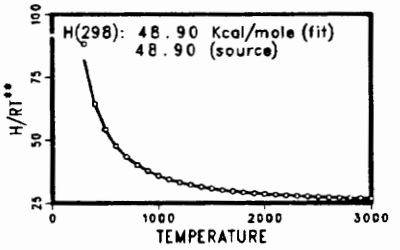
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

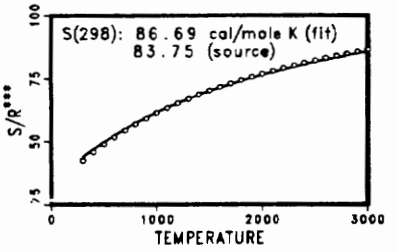
Species: SIH3NSIH3 DISILYLAMIDOGEN GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02827574E+02	0.02580646E+00	-0.04200477E-05	-0.15038588E-07	0.06388324E-10	0.02265351E+06	0.01997012E+03
1000-3000K	0.12014620E+02	0.09187517E-01	-0.09159516E-05	-0.09380967E-08	0.02156435E-11	0.01965065E+06	-0.02978185E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

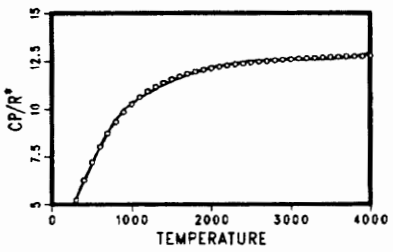
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

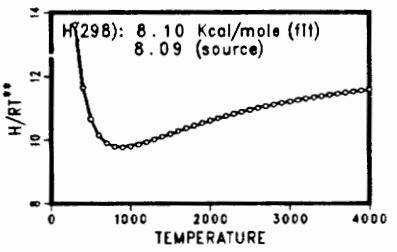
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

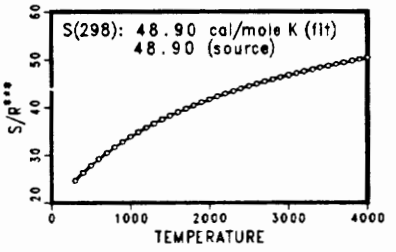
Species: SIH4 SILANE GAS As of: 12/13/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02475166E+02	0.09003721E-01	0.02185394E-04	-0.02681423E-07	-0.06621080E-11	0.02925488E+05	0.07751014E+02
1000-4000K	0.06893873E+02	0.04030500E-01	-0.04183314E-05	-0.02291394E-08	0.04384766E-12	0.11070374E+04	-0.01749116E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

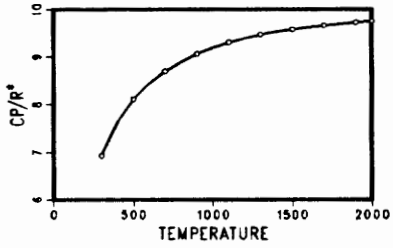
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

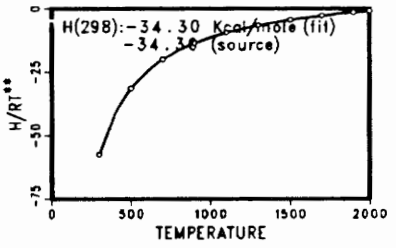
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

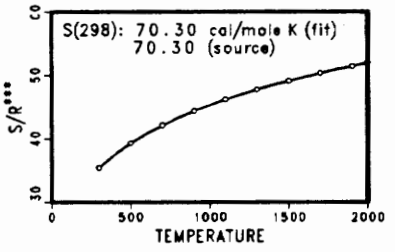
Species: SIHCL2 DICHLOROSILYL RADICAL GAS As of: 12/19/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02368353E+02	0.02401088E+00	-0.03717219E-03	0.02851997E-06	-0.08530494E-10	-0.01875884E+06	0.16145866E+02
1000-2000K	0.07229734E+02	0.02869205E-01	-0.08849876E-05	-0.07495865E-09	0.05752338E-12	-0.01971399E+06	-0.07052663E+02







Source: SNLL FIT TO DATA GENERATED USING VIBRATIONAL FREQUENCIES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

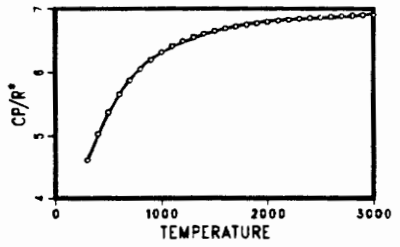
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

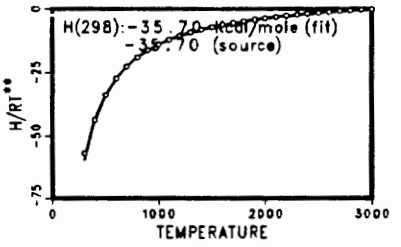
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

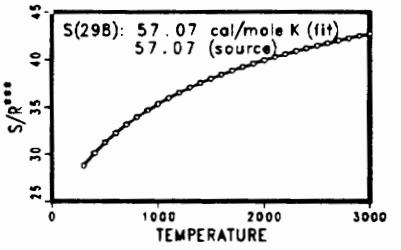
Species: SIHF FLUOROSILYLENE GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03223727E+02	0.04981220E-01	-0.03173051E-05	-0.02822231E-07	0.12478316E-11	-0.01914167E+06	0.08906423E+02
1000-3000K	0.05073508E+02	0.15332789E-02	-0.01840658E-05	-0.14400376E-09	0.03452517E-12	-0.01973879E+06	-0.10795069E+01







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

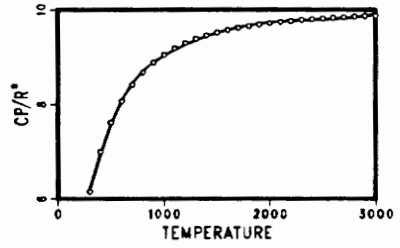
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

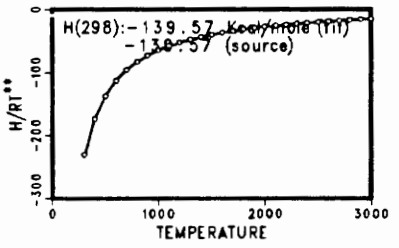
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

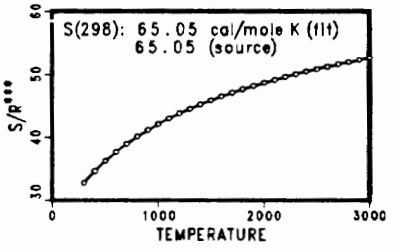
Species: SIHF2 DIFLUOROSILYL GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03377237E+02	0.10366072E-01	-0.12390823E-05	-0.07267981E-07	0.03794989E-10	-0.07168358E+06	0.10521894E+02
1000-3000K	0.07216536E+02	0.02253240E-01	-0.02737472E-05	-0.02173460E-08	0.05255331E-12	-0.07280241E+06	-0.09783487E+02







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

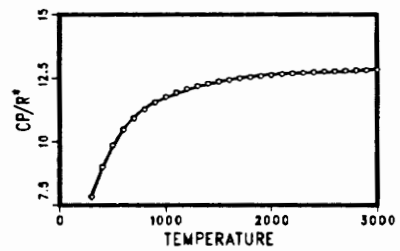
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

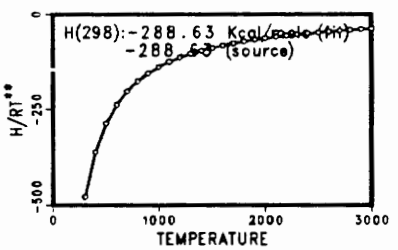
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

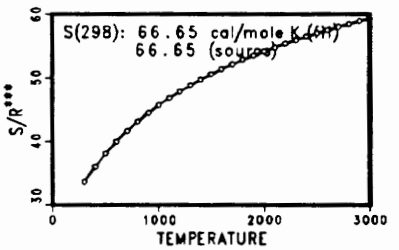
Species: SIHF3 TRIFLUOROSILANE GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03918053E+02	0.14639172E-01	-0.01856069E-04	-0.10582003E-07	0.05617543E-10	-0.14704386E+06	0.07024261E+02
1000-3000K	0.09363567E+02	0.02947555E-01	-0.03577633E-05	-0.02858224E-08	0.06915728E-12	-0.14860736E+06	-0.02169452E+03







Source: SNLL FIT TO BAC-MP4 DATA

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

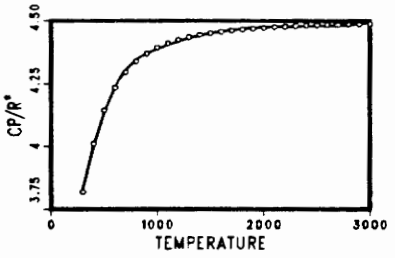
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

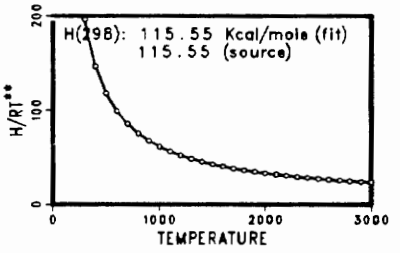
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

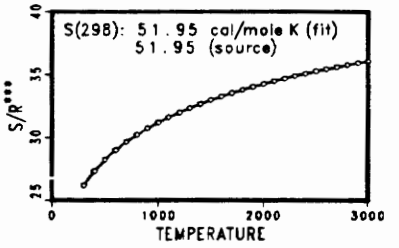
Species: SIN SILICON NITRIDE GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03149181E+02	0.02584376E-01	-0.05804624E-05	-0.01805626E-07	0.10410949E-11	0.05710563E+06	0.07474389E+02
1000-3000K	0.04122909E+02	0.03521457E-02	-0.07161080E-06	-0.02154956E-09	0.06667570E-13	0.05683927E+06	0.02389837E+02







Source: SNLL FIT TO BAC-MP4 DATA

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

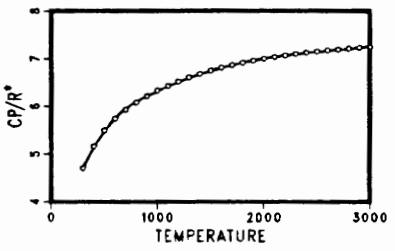
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

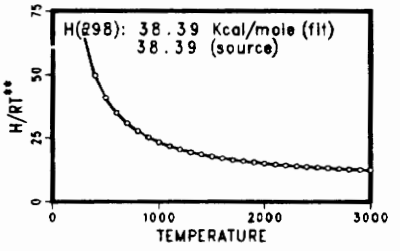
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

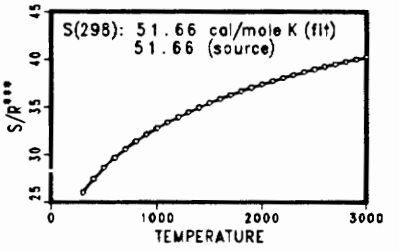
Species: SINH GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03166974E+02	0.05805822E-01	-0.09524443E-05	-0.03991892E-07	0.02283188E-10	0.01813560E+06	0.06298439E+02
1000-3000K	0.04928800E+02	0.16286244E-02	-0.13671971E-06	-0.13904604E-09	0.02998968E-12	0.01767789E+06	-0.02823472E+02







Source: SNLL FIT TO BAC-MP4 DATA

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

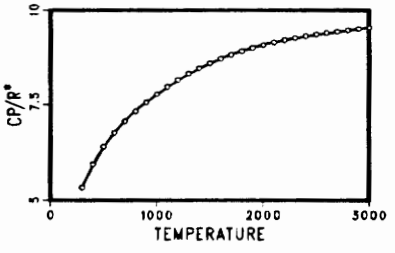
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

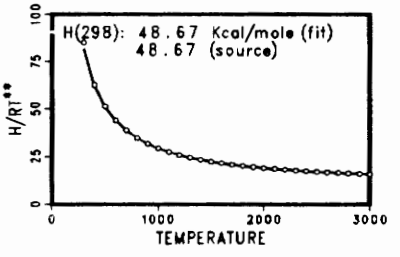
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

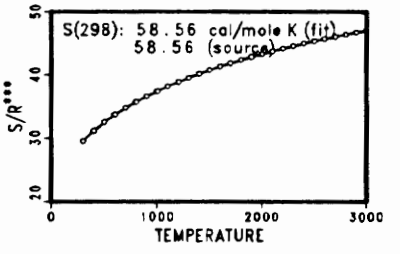
Species: SINH2 AMINOSILYLIDYNE GAS As of: 4/24/89

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03362769E+02	0.07261175E-01	-0.08721233E-05	-0.04400014E-07	0.02419532E-10	0.02318445E+06	0.08223867E+02
1000-3000K	0.05186435E+02	0.03016656E-01	-0.02165476E-05	-0.02722658E-08	0.05706182E-12	0.02270507E+06	-0.12421399E+01







Source: SNLL FIT TO BAC-MP4 DATA

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

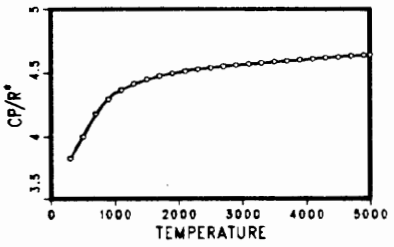
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

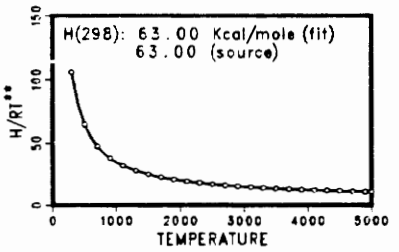
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

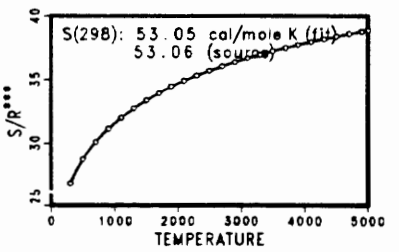
Species: SN SULFUR NITRIDE GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03407345E+02	0.01797887E-01	-0.02018969E-04	0.02107857E-07	-0.09527593E-11	0.03062373E+06	0.06821481E+02
1000-5000K	0.03888286E+02	0.06778427E-02	-0.02725308E-05	0.05135927E-09	-0.03593836E-13	0.03044496E+06	0.04194291E+02







Source: SNLL FIT TO JANAF TABLES

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

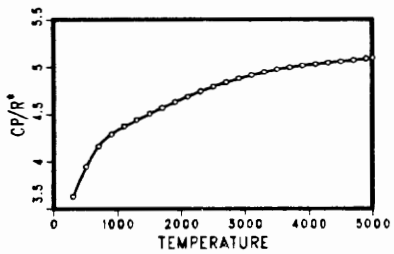
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

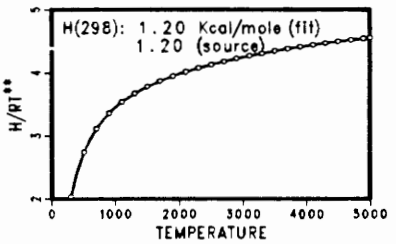
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

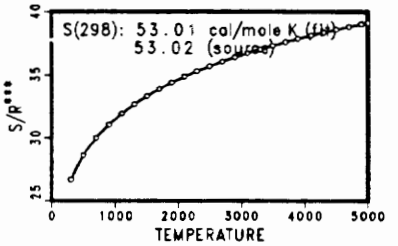
Species: SO SULFUR MONOXIDE GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.03080401E+02	0.01803105E-01	0.06705022E-05	-0.02069005E-07	0.08514657E-11	-0.03986163E+04	0.08581028E+02
1000-5000K	0.04021077E+02	0.02584856E-02	0.08948142E-06	-0.03580144E-09	0.03228430E-13	-0.07119620E+04	0.03452522E+02







Source: SNLL FIT TO JANAF TABLES

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

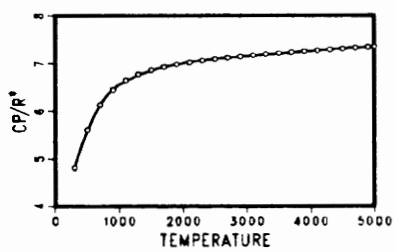
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

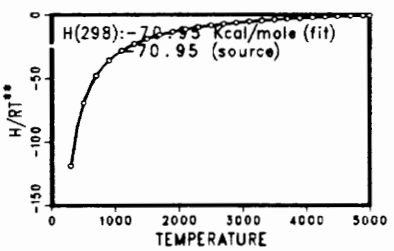
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

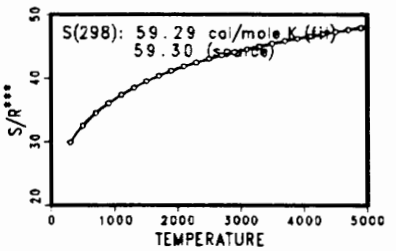
Species: SO2 SULFUR DIOXIDE GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02911438E+02	0.08103022E-01	-0.06906710E-04	0.03329015E-07	-0.08777121E-11	-0.03687881E+06	0.11117403E+02
1000-5000K	0.05254498E+02	0.01978545E-01	-0.08204226E-05	0.15763830E-09	-0.11204512E-13	-0.03756885E+06	-0.11460563E+01







Source: SNLL FIT TO JANAF TABLES

* $C_P/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

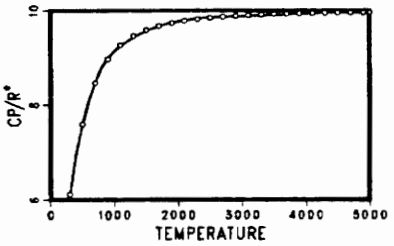
** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

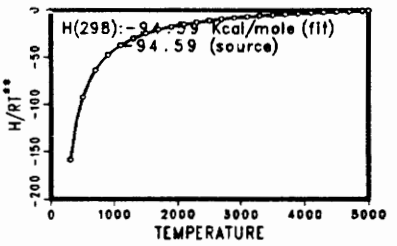
*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

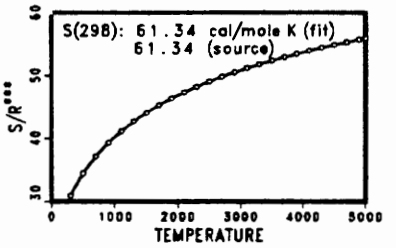
Species: SO3 SULFUR TRIOXIDE GAS As of: 12/12/86

Fit

Coefficients	a_1	a_2	a_3	a_4	a_5	a_6	a_7
0300-1000K	0.02575282E+02	0.15150916E-01	-0.12298717E-04	0.04240257E-07	-0.05266812E-11	-0.04894410E+06	0.12195116E+02
1000-5000K	0.07050668E+02	0.03246560E-01	-0.14088974E-05	0.02721535E-08	-0.01942364E-12	-0.05020667E+06	-0.11064426E+02







Source: SNLL FIT TO JANAF TABLES

* $CP/R = a_1+a_2T+a_3T^2+a_4T^3+a_5T^4$

** $H/RT = a_1+a_2T/2+a_3T^2/3+a_4T^3/4+a_5T^4/5+a_6/T$

*** $S/R = a_1\ln(T)+a_2T+a_3T^2/2+a_4T^3/3+a_5T^4/4+a_7$

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